

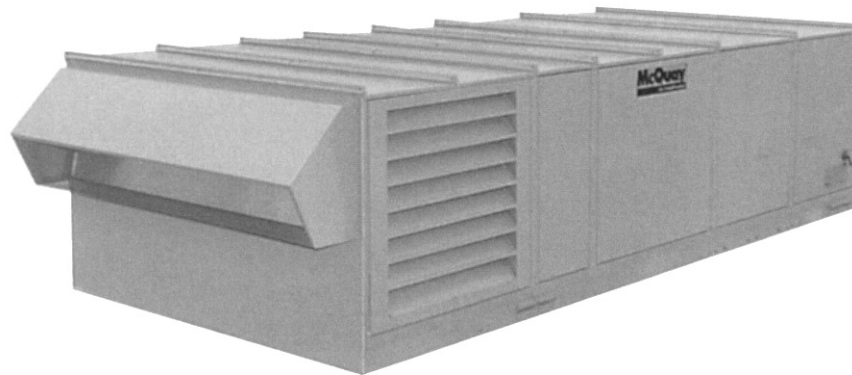
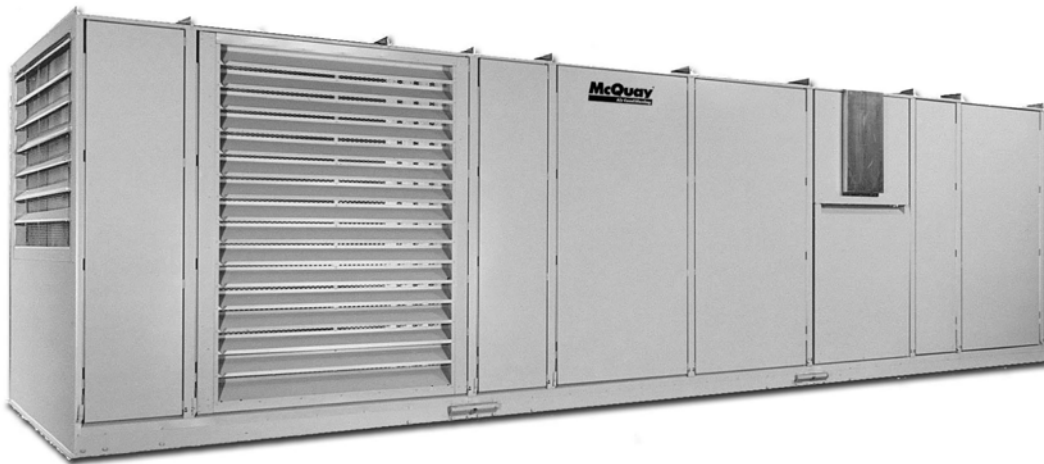
Rooftop Air Handler Dimensional Data

Group: **Applied Air**

Date: October 2007

Supercedes: 9035

Type RDS 708B, 800C & 802C
Type RAH 047C & 077C

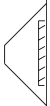
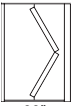
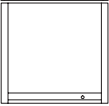
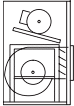
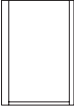
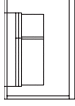

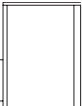


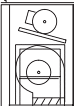

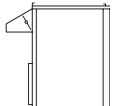
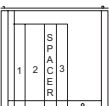
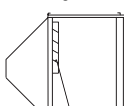
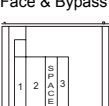

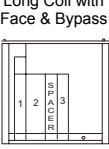
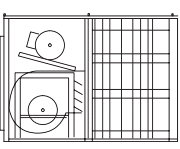


Dimensional Data — RDS 708B

Section Options and Locations

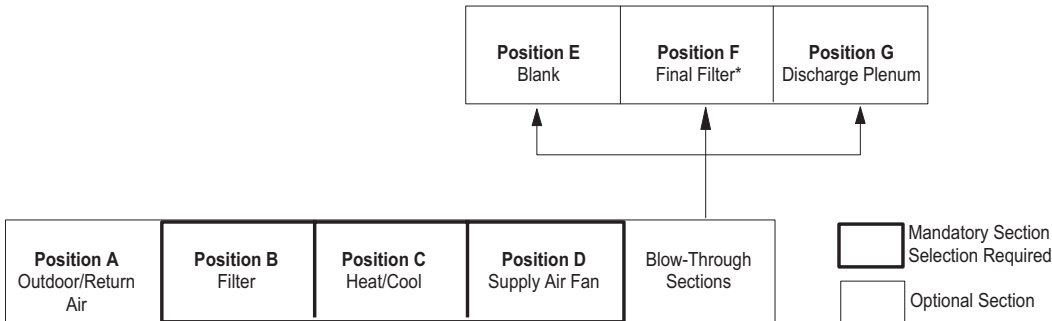
Figures show section options, curb lengths, and relative positions. Curb lengths (in inches) are shown below each icon.

Figure 1: RDS 708B

Position A Outdoor Return Air	Position B Filter	Position C Heat/Cool	Position D Supply Air Fan	Position E Blank	Position F Final Filter*	Position G Discharge Plenum
Outdoor Air Hood  0"	Angular  33"	Drain Pan Only  48"	Front Discharge  33"	Blank Access  33"	Cartridge  33"	Discharge Plenum  33"
Return Plenum  33"	Cartridge  33"	Short Coil  48"	Down Discharge  33"		Blank Access  33"	
30% Outside Air  33"		Long Coil  48"				
Mixing Box  33"		Short Coil with Face & Bypass  48"				
Economizer  66"		Long Coil with Face & Bypass  48"				
Economizer with Return Air Fan  66"						

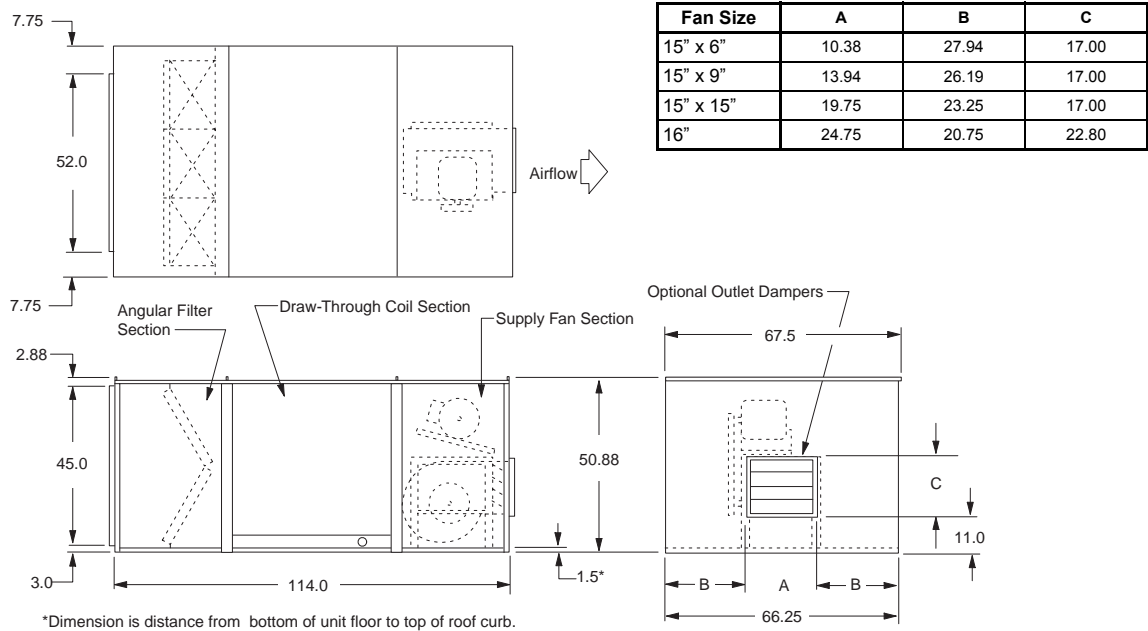
* When Final Filter section is provided, a Blank section (Position E) and a Discharge Plenum (Position G) are required.

Section Diagram — RDS 708B



Basic Unit

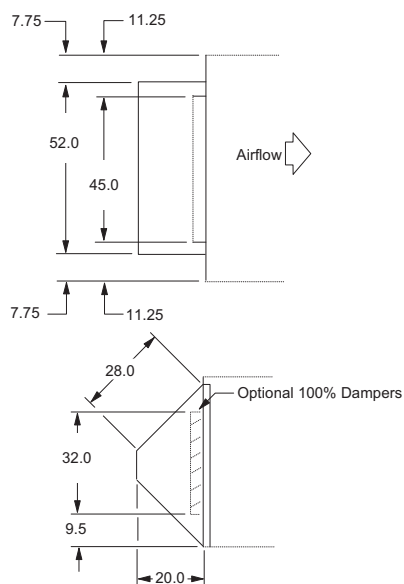
Figure 2: Basic Unit



Position A - Outdoor/Return Air Section

Figure 3: Outside Air Hood

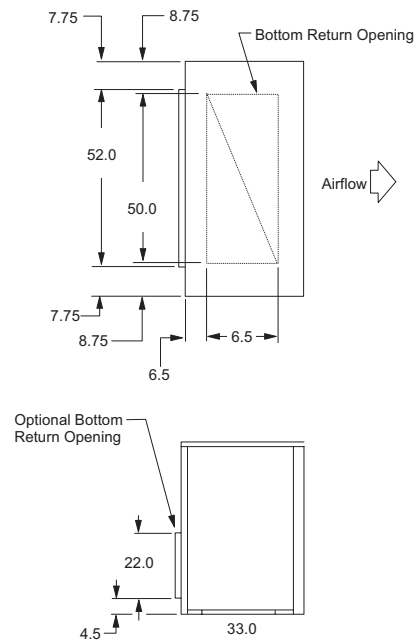
- ☐ Less Dampers
- ☐ With Dampers



Note: This option does not affect unit curb length.

Figure 4: Return Air Plenum

- ☐ Bottom Return
- ☐ Back Return



Position A - Outdoor/Return Air Section (continued)

Figure 5: Return Air Plenum - 30% Outside Air Hood

- Bottom Return
- Back Return

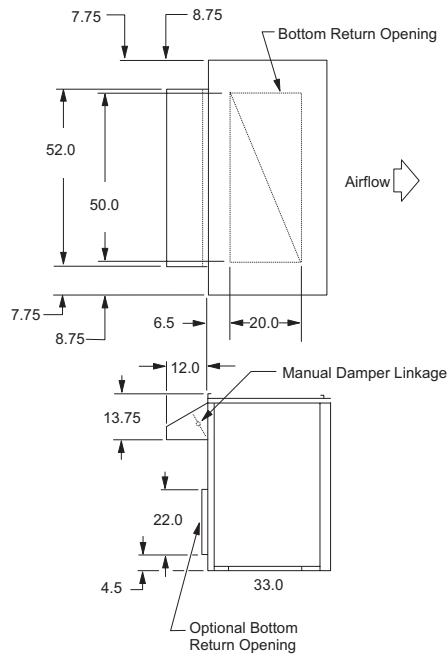


Figure 6: Outside/Return Air Mixing Box

- Bottom Return

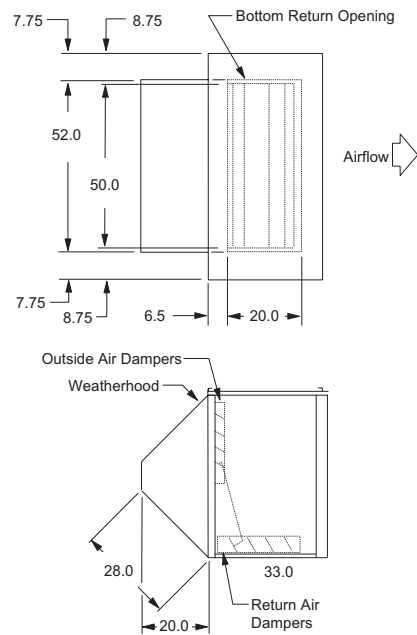
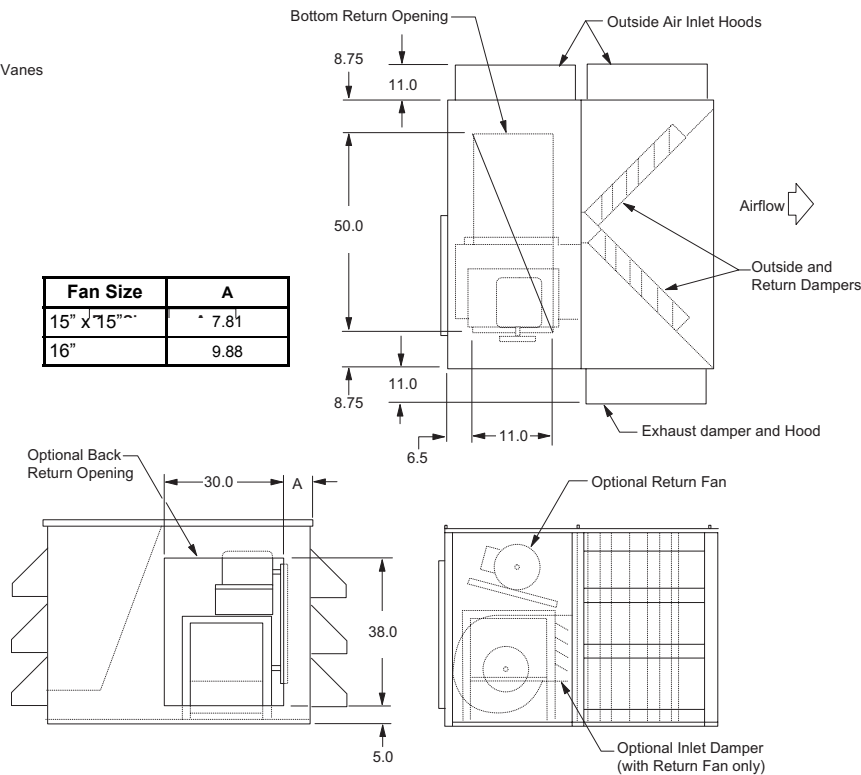


Figure 7: Economizer

- Bottom Return
 - Back Return
- Return Fan:**
- 15" x 15" Forward Curved
 - 15" x 15" Forward Curved with Inlet Vanes
 - 16" Airfoil
 - 16" Airfoil with Inlet Vanes

Fan Size	A
15" x 15"	7.81
16"	9.88

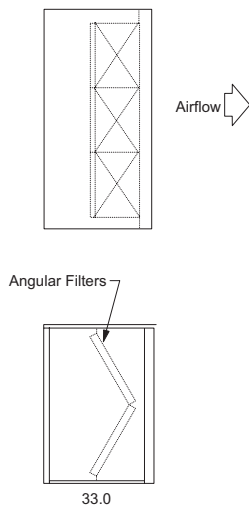


Note: Optional inlet damper available with forward curved return fan only.

Position B - Draw-through Filter Section — Mandatory Selection

Figure 8: Angular Filters

- ☐ Throwaway
- ☐ 30% Efficiency
- ☐ Cleanable

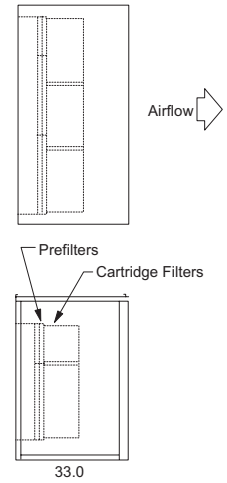


Filter Quantity & Size
 4 - 20 x 25 x 2 (1)
 or
 6 - 20 x 25 x 2 (2)

Notes:
 (1) Filter requirement for a 15" x 6" supply fan only.
 (2) Filter requirement for a 15" x 9", 15" x 15" or 16" supply fan.

Figure 9: Cartridge Filter with Prefilter

- ☐ 65% Efficiency
- ☐ 95% Efficiency



Filter Quantity & Size	
65% Efficiency	95% Efficiency
1 - 24 x 24 x 12 (1)	2 - 24 x 24 x 12 (1)
1 - 12 x 24 x 12	or
2 - 24 x 24 x 12 (2)	2 - 24 x 24 x 12 (2)
2 - 12 x 24 x 12	3 - 12 x 24 x 12

Notes:
 (1) Filter requirement for a 15" x 6" supply fan only.
 (2) Filter requirement for a 15" x 9", 15" x 15" or 16" supply fan.

Position C - Draw-through Heat/Cool Section — Mandatory Selection

Figure 10: Drain Pan Only

- ☐ Drain Pan Only

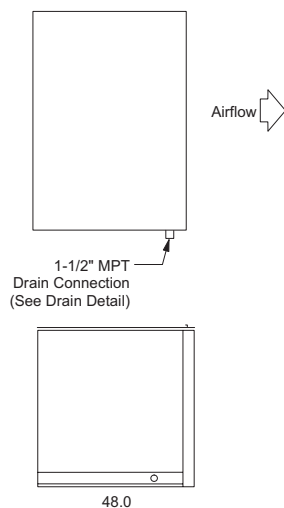
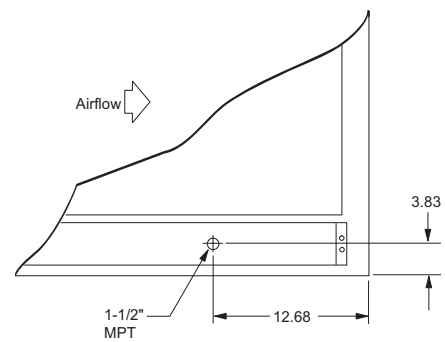


Figure 11: Drain Connection Detail



Position C — Draw-through Heat/Cool Section — Mandatory Selection

Figure 12: Short Coil

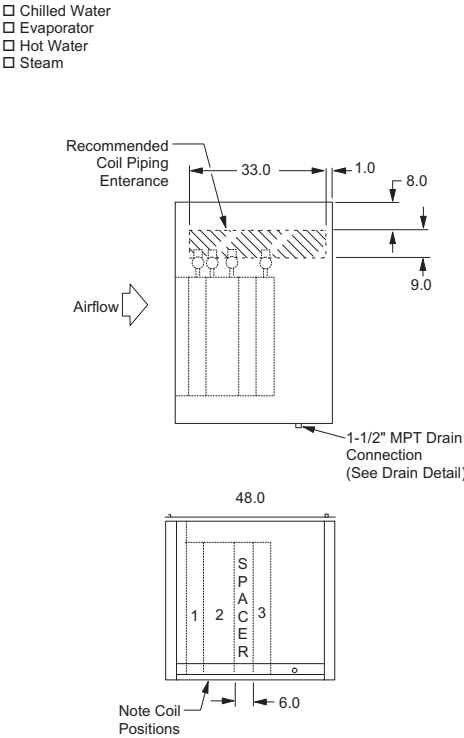


Figure 14: Short Coil with Face & Bypass

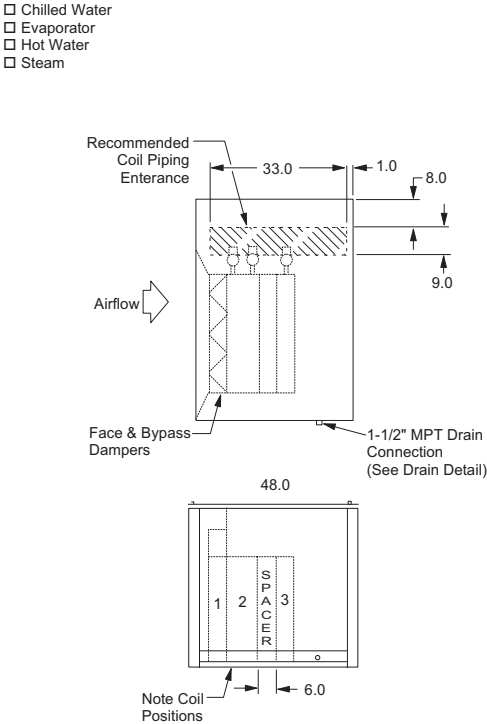


Figure 13: Long Coil

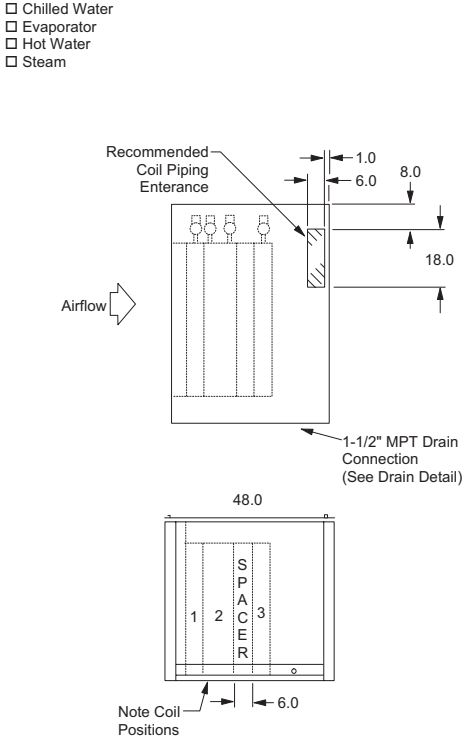
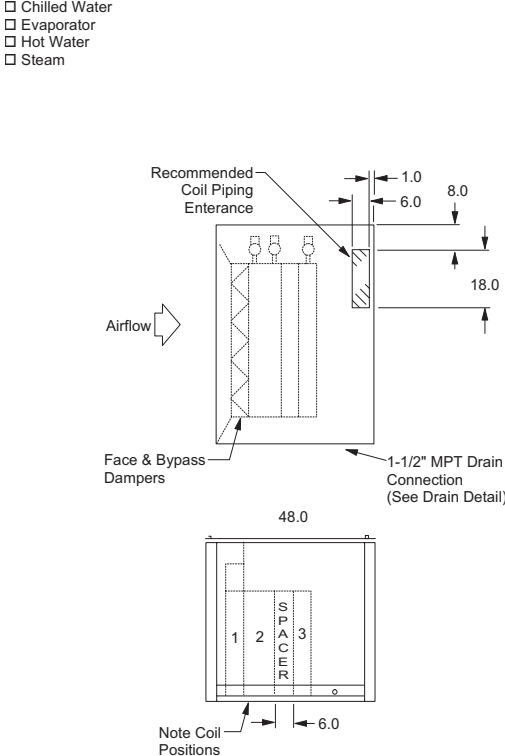


Figure 15: Long Coil with Face & Bypass

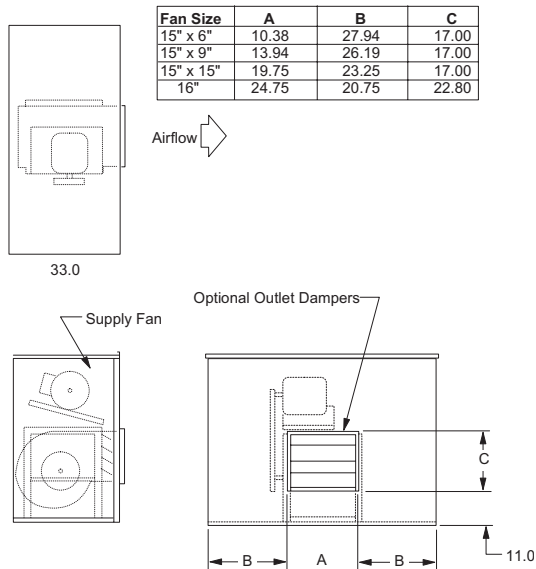


Note: Coil piping vestibule required (see Figure XX for detail drawing).

Position D — Supply Air Fan Section — Mandatory Selection

Figure 16: Front Discharge Fan

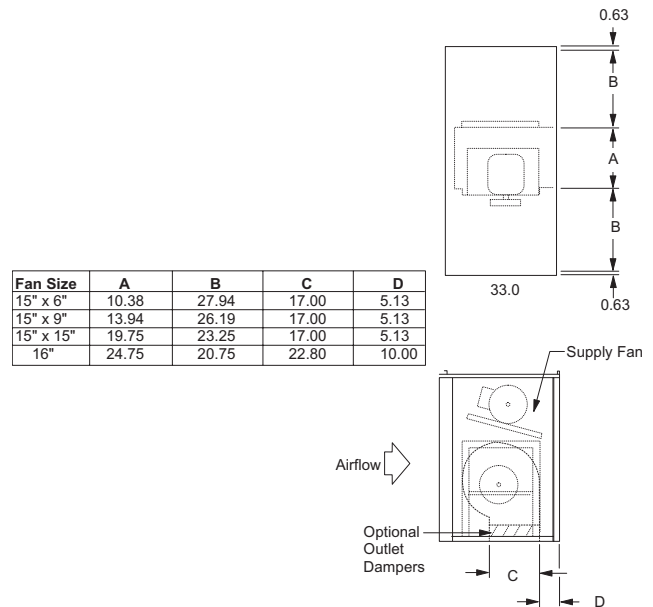
- ☐ 15" x 6" Forward Curved
- ☐ 15" x 9" Forward Curved
- ☐ 15" x 15" Forward Curved
- ☐ 15" x 15" Forward Curved with Inlet Vanes
- ☐ 16" Airfoil
- ☐ 16" Airfoil with Inlet Vanes



Note: Optional Inlet Damper available with forward curved supply fan only.

Figure 18: Down Discharge Fan

- ☐ 15" x 6" Forward Curved
- ☐ 15" x 9" Forward Curved
- ☐ 15" x 15" Forward Curved
- ☐ 15" x 15" Forward Curved with Inlet Vanes

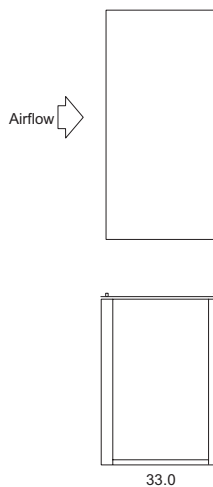


Note: Optional Inlet Damper available with forward curved supply fan only.

Blank Access Sections — Positions E & F

Figure 17: Blank Access Section

- ☐ Blank - 33" Section
- Section Locations:**
- ☐ Position E - Blow-through Blank Access Section (1)
 - ☐ Position F - Final Filter Section (2)



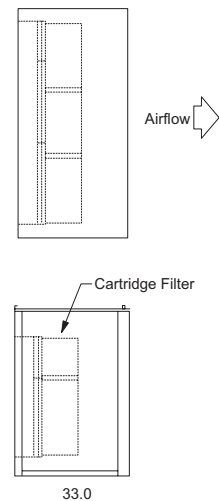
Notes:

- (1) Blank section in position E requires a discharge plenum in position G.
- (2) Blank section in position F requires a blank section in position E and a discharge plenum in position G.

Final Filter Section — Position F

Figure 19: Cartridge Filter

- ☐ 95% Efficiency

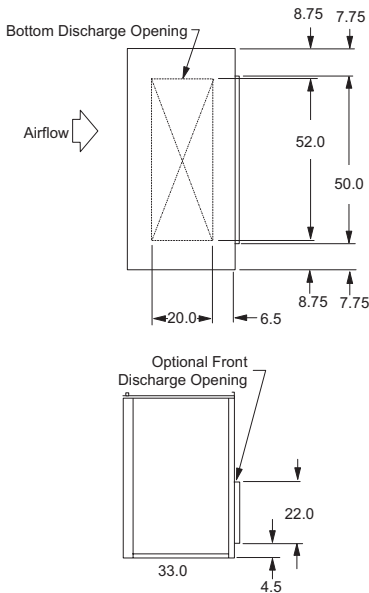


Filter Quantity & Size
 2 - 24 x 24 x 12
 3 - 12 x 24 x 2

Position G — Discharge Plenum

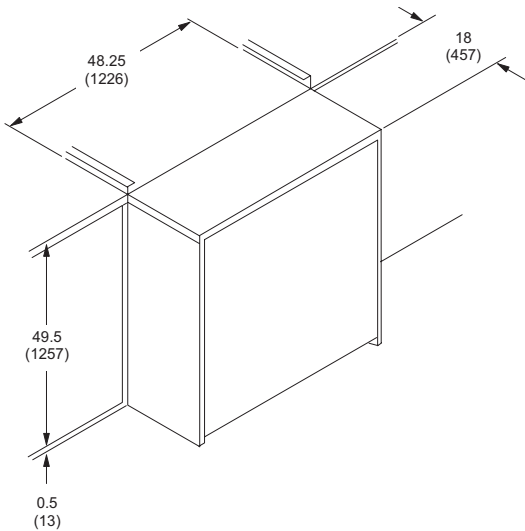
Figure 20: Discharge Plenum

- ☐ Bottom Discharge
- ☐ Front Discharge



Vestibule Detail Drawing

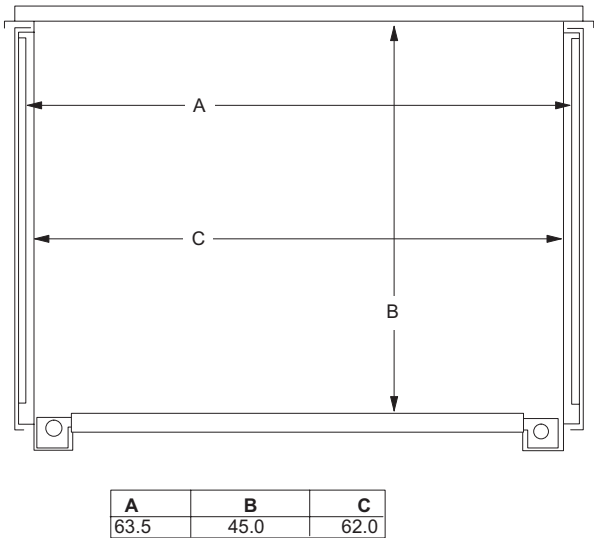
Figure 21: Field Installed Coil Piping Vestibule



Note: Vestibule required for 48" loong coil with piping entering within the curb and recommended for piping entering the side of the unit.

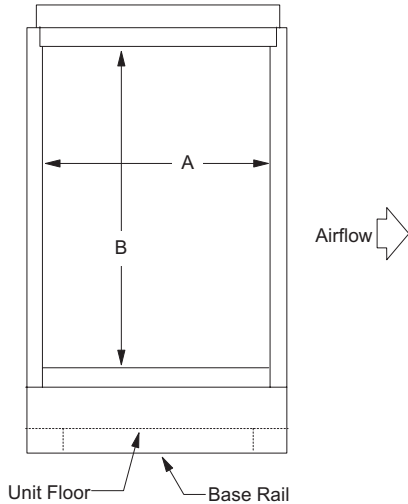
Blank Access and Drain Pan Only Section Detail Drawings

Figure 22: Cross Section Detail



- A = Door-to-door (with liners)
- B = Ceiling-to-floor (with liners)
- C = Upright-to-upright, located between sections

Figure 23: Access Door Detail



Cabinet Height	Door Opening	
	A	B
50.88	42.0	45.0

Note: Heat/Coil section access opposite to drain connection.

Roof Curbs

Figure 24: Roof Curb Knockouts

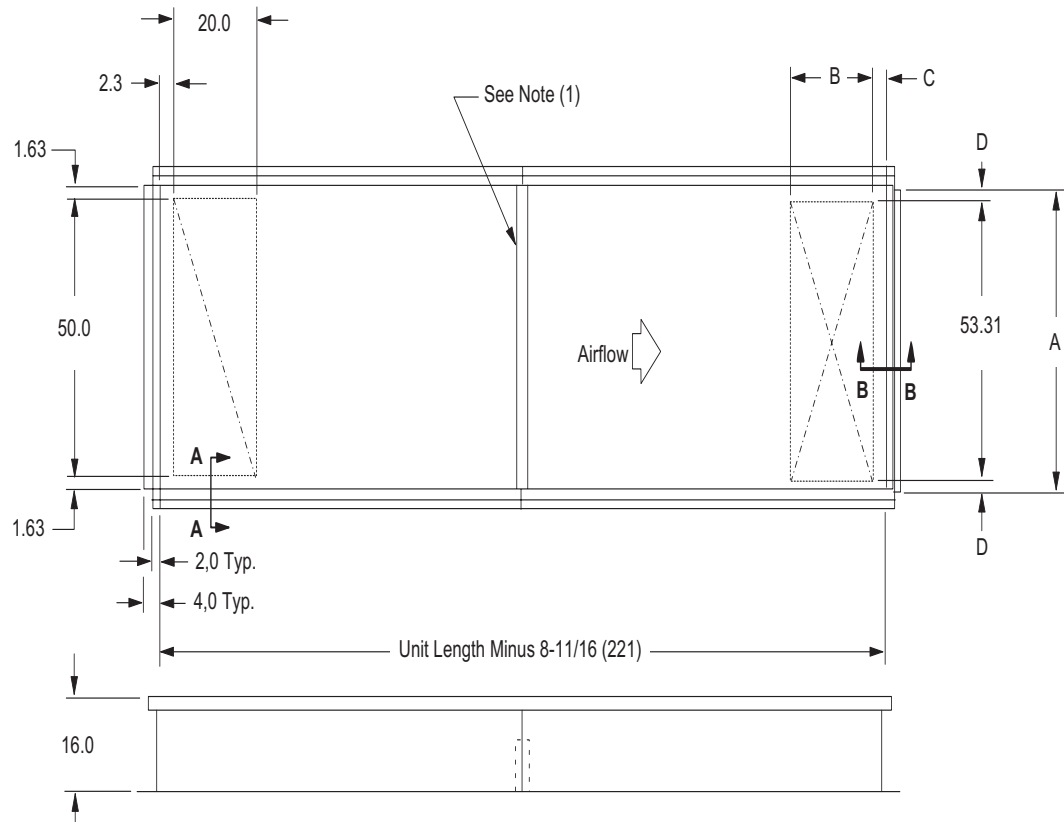
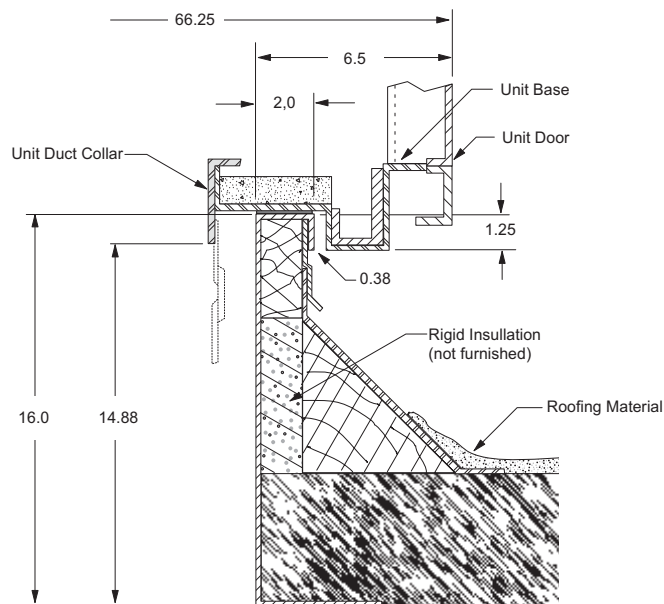
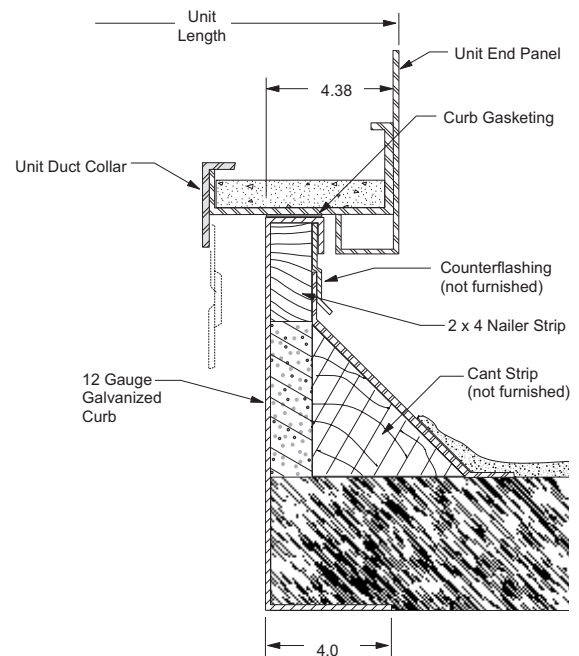


Figure 25: Curb Cross Section A-A



Curb Cross Section B-B








































Dimensional Data — RDS 800C

Section Options and Locations — RDS 800C

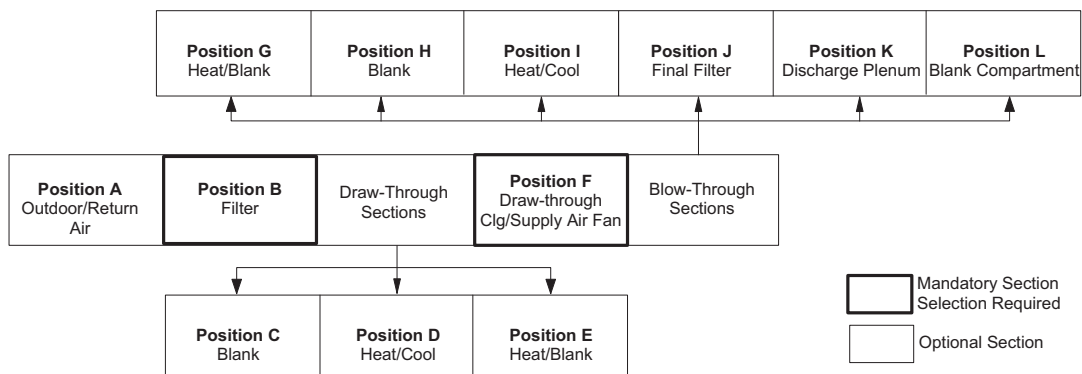
Figures show section options, curb lengths, and relative positions. Curb lengths (in inches) are shown below each icon.

Figure 26: RDS 800C

Position A	Position B	Position C	Position D	Position E	Position F	Position G	Position H	Position I	Position J	Position K	Position L
 0"	 22"	 40"	 40"	 40"	 40"	 40"	 40"	 40"	 28"	 40"	 40"
 40"	 22"	 52"	 40"	 40"	 40"	 40"	 52"	 40"	 52"		
 40"	 22"		 40"		 52"	 40"		 40"	 28"		
 40"	 28"				 52"	 40"		 40"	 52"		
 62"											
 62"											

DX = Direct Expansion Cooling
CW = Chilled Water Cooling
HT = Hot Water or Steam Heating

Section Diagram — RDS 800C



Application Considerations — RDS 800C

Unit Coils

- 1 Unit cooling coils are available in either direct expansion or chilled water type and can be located in the Heat/Cool sections, position D and I, and in the Draw-through Cooling/Supply Air Fan section, position F.
- 1 Unit chilled water coils are available with or without a factory installed control valve when provided without a combination heating coil.
- 1 Unit heating coils are available in either steam or hot water type and can be located in the Heat/Cool sections, positions D and I, or the Heat sections, positions E and G.
- 1 Unit heating coils are available with or without a factory installed control valve in the Heat sections, positions E and G.

Contractor Coils

- 1 Contractor coils are available in direct expansion, chilled water, steam and hot water type and are located in the Heat/Cool sections, positions D and I.
- 1 Contractor coils are available with or without factory installed face and bypass dampers less actuator.

Electric Heat

- 1 Electric heating coils are located in the Blow-through Heat section, position G only.

Gas Heat

- 1 A gas heating furnace is located in the Blow-through Heat section, position G only.

Final Filters

- 1 Final filters are not available with a drain pan only or any option with a cooling coil located in the Blow-through Heat/Cool section, position 1.

Blank Access Compartment

- 1 The blank access compartment is available on units with a discharge plenum in position K with bottom or side discharge only.

General

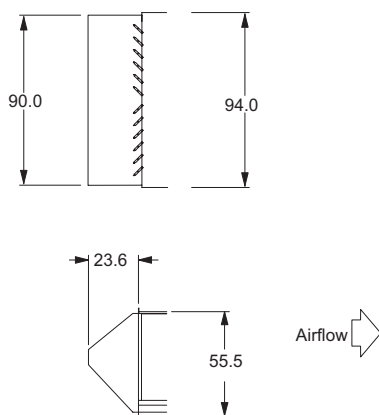
- 1 When any section is located in position H (Blank Access section), I (Blow-through Heat/Cool section), or J (Final Filter section), a heating or blank section must be placed in position G to provide proper airflow diffusion for the sections that follow the supply air fan.

Position A - Outdoor/Return Air Section — RDS 800C

Figure 27: Outside Air Hood

100% Outdoor air hood

- ☐ With dampers
- ☐ Without dampers

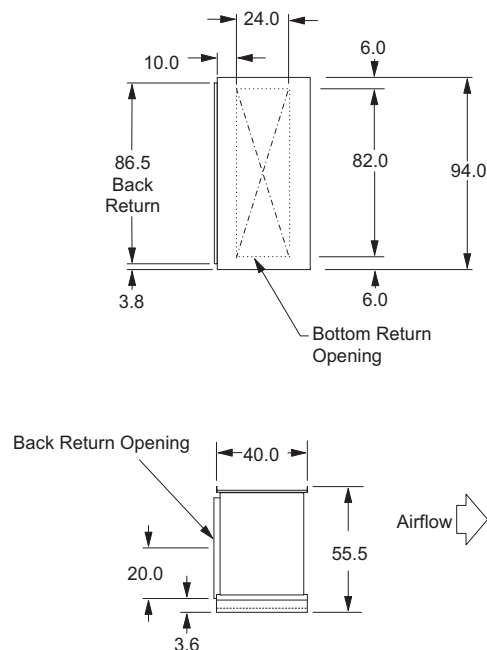


Note: This option does not affect unit curb length

Figure 28: Return Air Plenum

Return Air Plenum

- ☐ Bottom return
- ☐ Back return



Position A - Outdoor/Return Air Section (continued) — RDS 800C

Figure 29: Return Air Plenum - 30% Outside Air Hood

Return Air Plenum
☐ Bottom return
☐ Back return

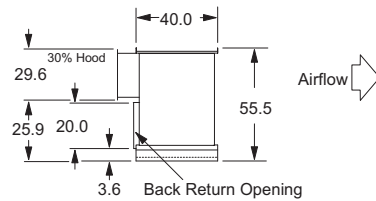
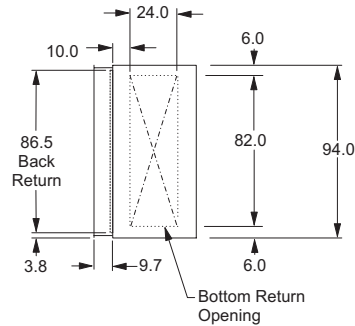


Figure 31: Economizer with Return Air Fan

Economizer with return air fan
☐ 2 - 15" x 15" forward curved with bottom return
☐ 2 - 15" x 15" forward curved with back return

Option:
☐ With light, receptacle and switch

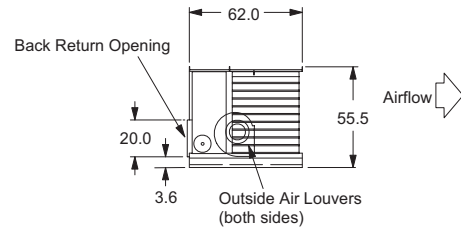
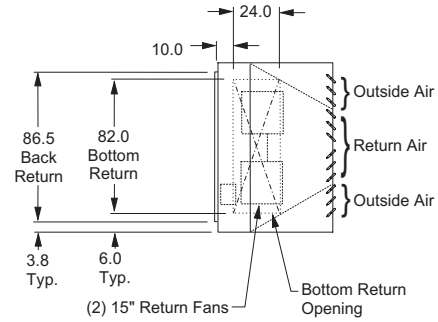


Figure 30: Economizer

Economizer
☐ Bottom return
☐ Back return

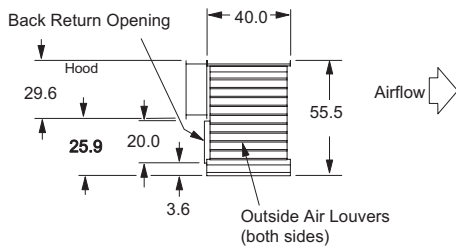
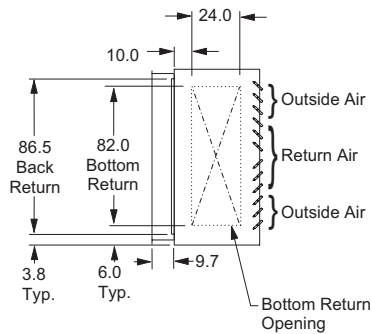
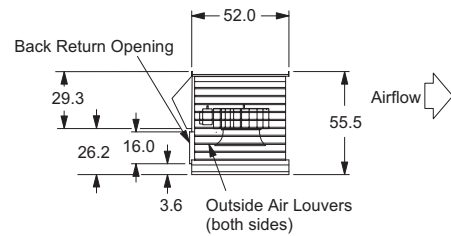
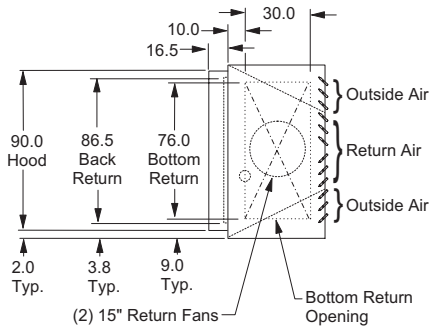


Figure 32: Economizer with Return Air Fan

Economizer with return air fan
☐ 1 - 30" Airfoil with bottom return
☐ 1 - 30" Airfoil with back return
☐ 1 - 30" Airfoil with variable inlet vanes with bottom return
☐ 1 - 30" Airfoil with variable inlet vanes with back return

Option:
☐ With light, receptacle and switch



Position B - Draw-through Filter Section — Mandatory Selection — RDS 800C

Figure 33: Angular Filters

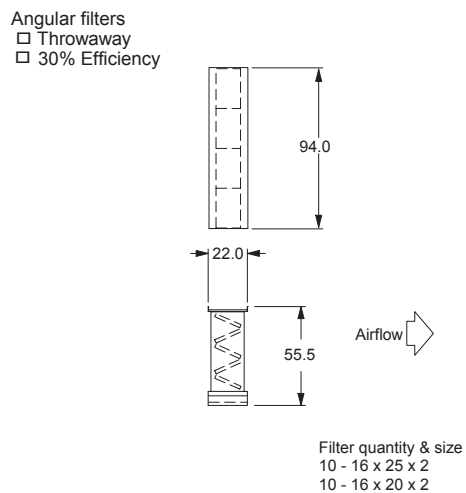
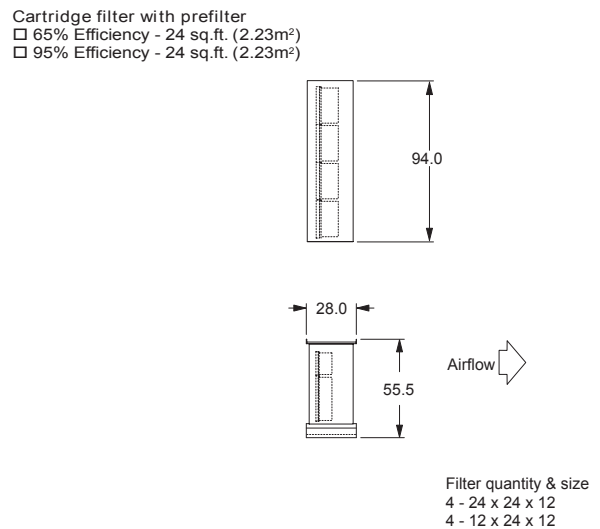


Figure 34: Cartridge Filter with Prefilter



Blank Access Sections — positions B, C, E, H and J — RDS 800C

Figure 35: Blank Access Section

- Blank access section
☐ Blank - 22" section
- Selection location:
☐ Position B - Draw-through filter section

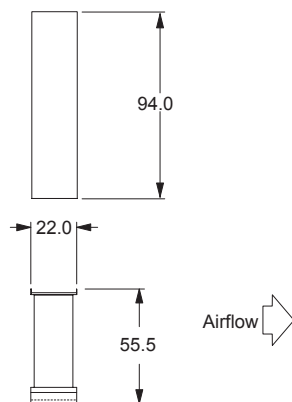
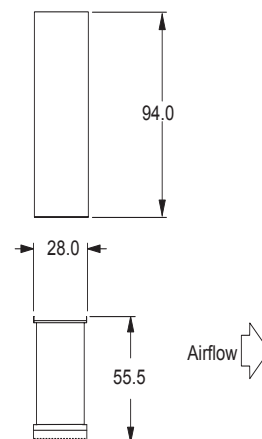


Figure 36: Blank Access Section

- Blank access section
☐ Blank - 28" section
- Selection location: (1)
☐ Position B - Draw-through filter section
☐ Position J - Final filter section (2)

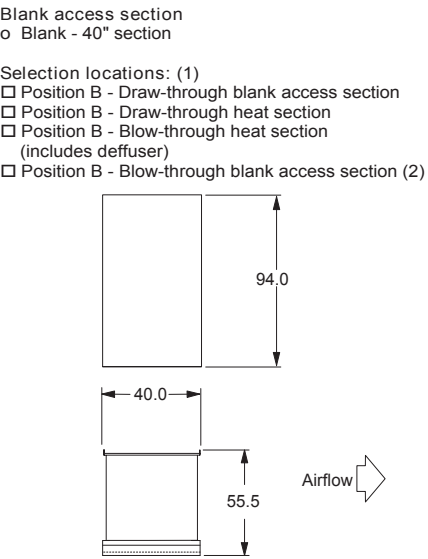


Notes:

- (1) This section may be located in one or more of the locations listed above.
- (2) Blank access section in position J requires a blank or heat section in position G.

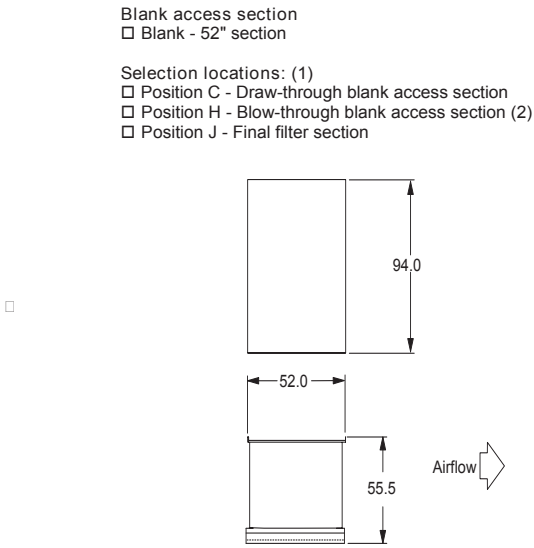
Blank Access Sections — positions B, C, E, H and J (continued) — RDS 800C

Figure 37: Short Coil



Notes:
(1) This section may be located in one or more of the locations listed above.
(2) Blank access section in position H requires a blank or heat section in position G.

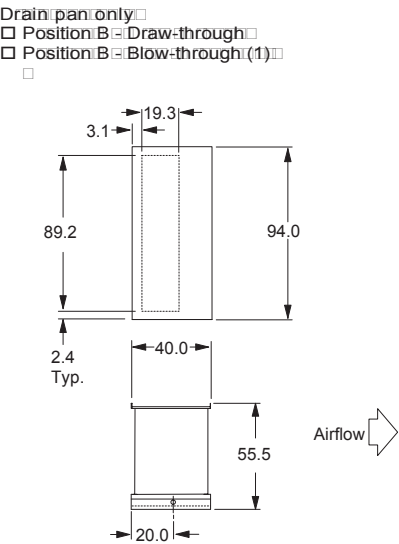
Figure 38: Short Coil with Face & Bypass



Notes:
(1) This section may be located in one or more of the locations listed above.
(2) Blank access section in position H or J requires a blank or heat section in position G.

Heat/Cool Section — Drain Pan Only — Position D or I — RDS 800C

Figure 39: Drain Pan Only



Notes:
(1) Drain pan only section in position I requires a blank or heat section in position G.

Section D — Draw-through Heat/Cool Section — RDS 800C

Figure 40: Unit Heating and Cooling

- Heating coil (21.1 sq.ft.)**
☐ Steam
☐ Hot water
- Cooling coil**
☐ Chilled water (26.0 sq.ft.)
☐ DX evaporator (27.3 sq.ft.)

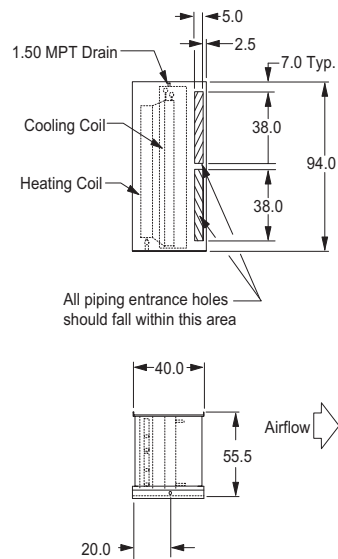
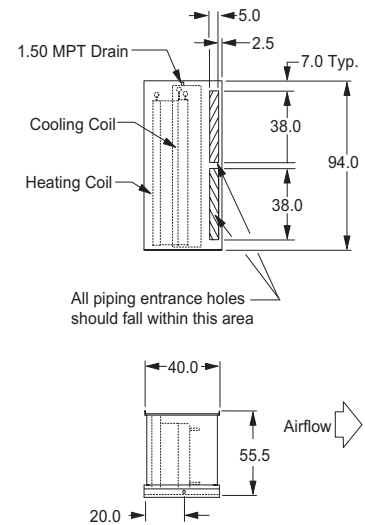


Figure 41: Contractor Heating and Cooling (1)

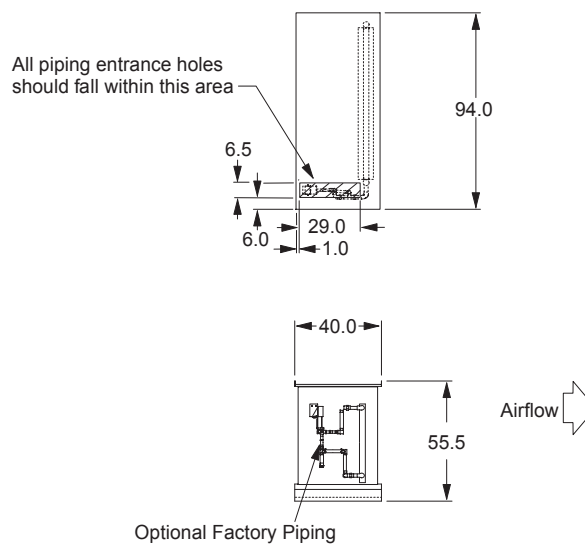
- Heating coil**
☐ Steam
☐ Hot water
- Cooling coil**
☐ Chilled water
☐ DX evaporator
- Options**
☐ With face and bypass damper less actuator



Section D — Draw-through Heat Only Section — RDS 800C

Figure 42: Steam/Hot Water Heat

- Steam/hot water heat**
☐ Steam coil (20.3 sq.ft.)
☐ Steam coil with 2-way modulating valve & piping (20.3 sq.ft.)
☐ Hot water coil (20.3 sq.ft.)
☐ Hot water coil with 3-way modulating valve & piping (20.3 sq.ft.)



Position F— Draw-through Cooling/Supply Air Fan Section **— Mandatory Section — RDS 800C**

Figure 43: Supply Air Fan with Cooling Coil

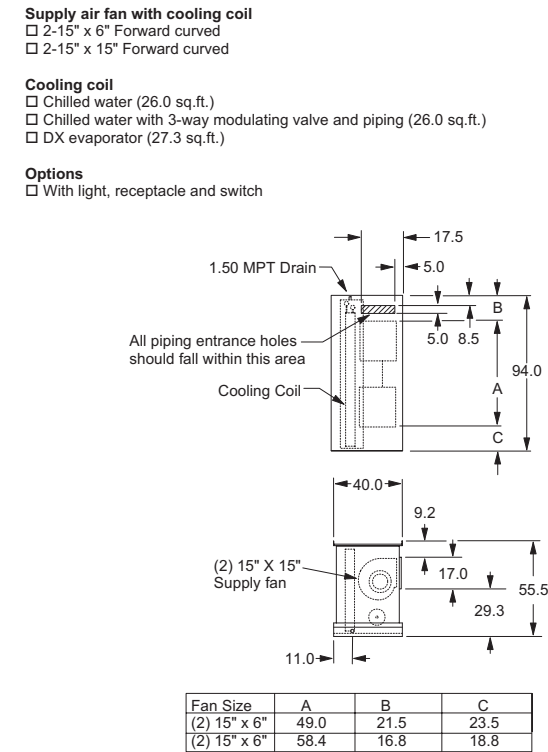


Figure 45: Supply Air Fan with Cooling Coil

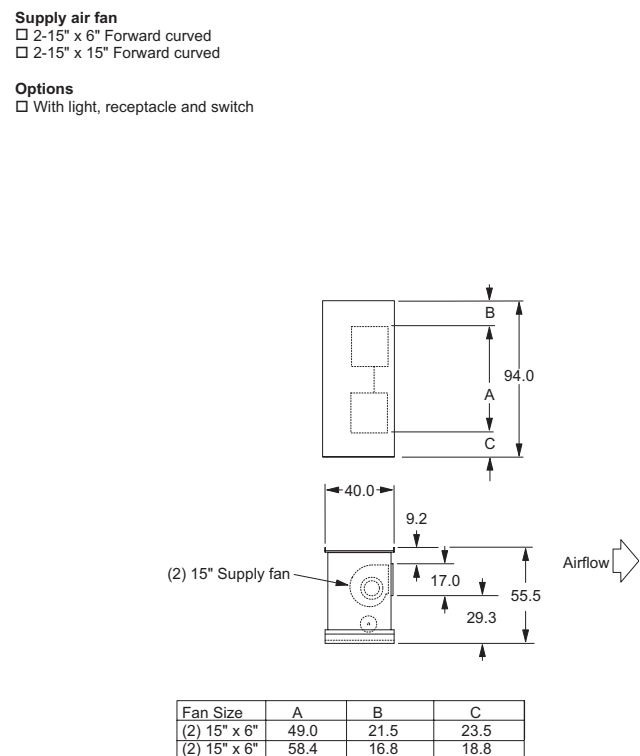


Figure 44: Supply Air Fan with Cooling Coil

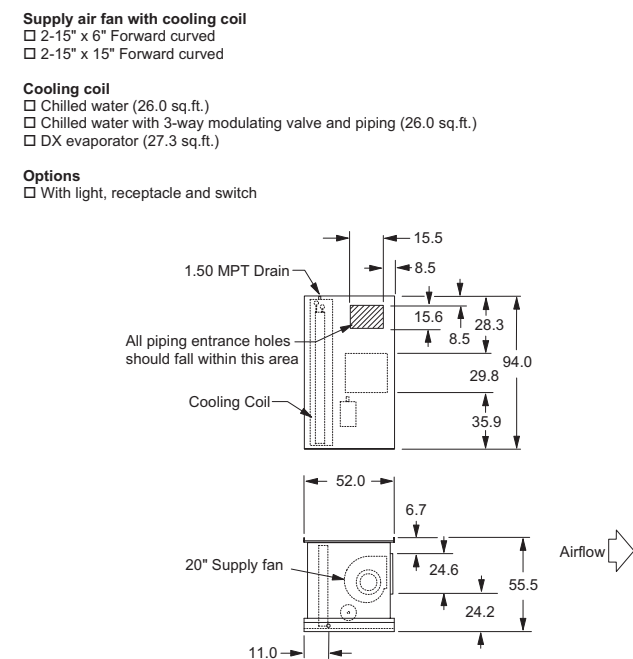
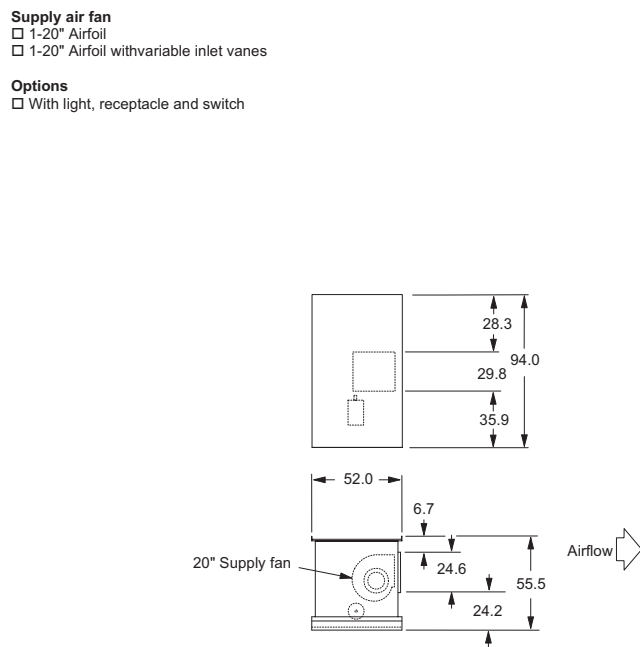


Figure 46: Supply Air Fan



Position G — Blow-through Heat Only Section — RDS 800C

Figure 47: Steam/Hot Water Heat

Steam/hot water heat

- ☐ Steam coil (20.3 sq.ft.)
- ☐ Steam coil with 2-way modulating valve & piping (20.3 sq.ft.)
- ☐ Hot water coil (20.3 sq.ft.)
- ☐ Hot water coil with 3-way modulating valve & piping (20.3 sq.ft.)

Note:

Typical hot water piping shown, see IM178 for typical steam piping.

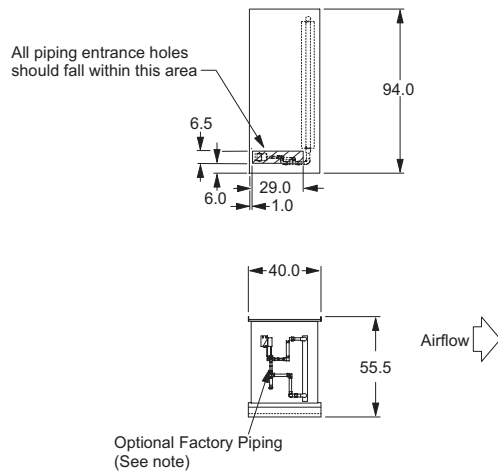


Figure 48: Gas Heat

Gas heat

- ☐ Gas heat with controls (200-1000 mbh output)

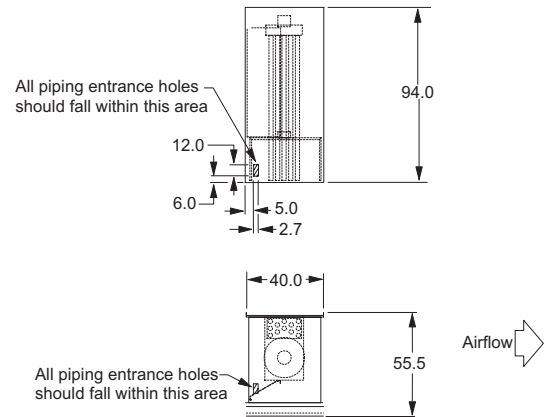
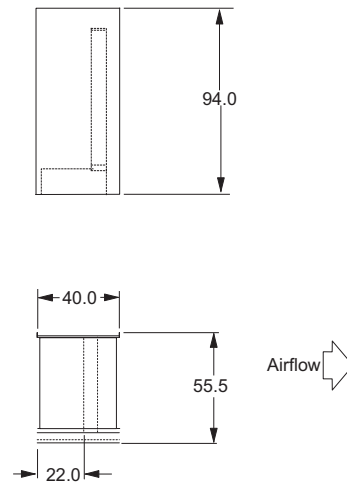


Figure 49: Electric Heat

Electric heat

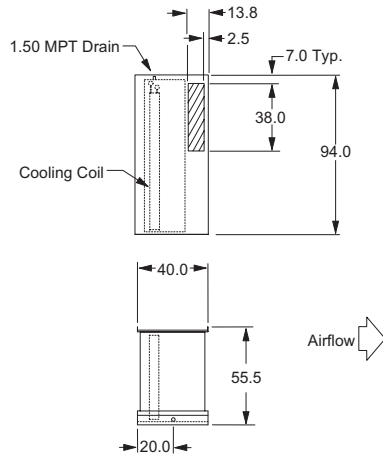
- ☐ Electric heat



Position I — Blow-through Heat/Cool Section — RDS 800C

Figure 50: Unit Cooling Coil Only

- Cooling coil**
- ☐ Chilled water (26.0 sq.ft.)
 - ☐ Chilled water with 3-way modulating valve and piping (26.0 sq.ft.)
 - ☐ DX evaporator (27.3 sq.ft.)



Note:
Blow-through heat/cool section in position I requires a blank or heating section in position G.

Figure 51: Unit Heating Coil Only

- Heating coil (21.1 sq.ft.)**
- ☐ Steam
 - ☐ Hot water
- Cooling coil**
- ☐ Chilled water (26.0 sq.ft.)
 - ☐ DX evaporator (27.3 sq.ft.)

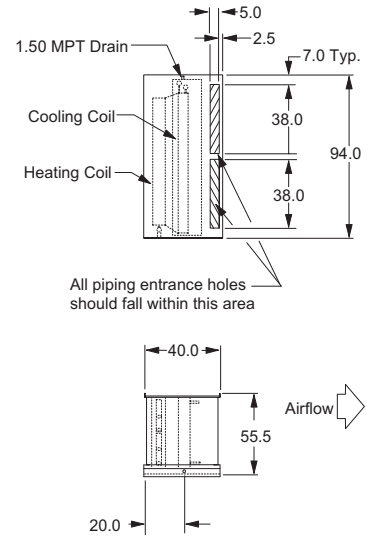
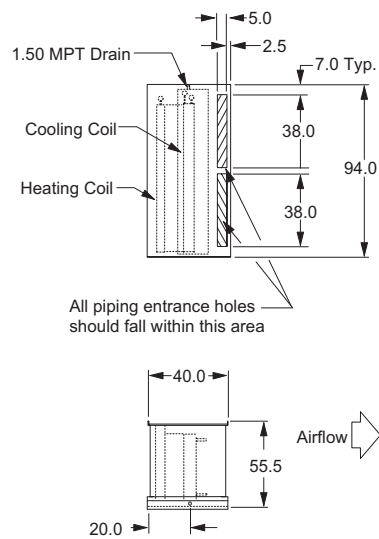


Figure 52: Contractor Heating and Cooling

- Heating coil**
- ☐ Steam
 - ☐ Hot water
- Cooling coil**
- ☐ Chilled water
 - ☐ DX evaporator
- Options**
- ☐ With face and bypass damper less actuator

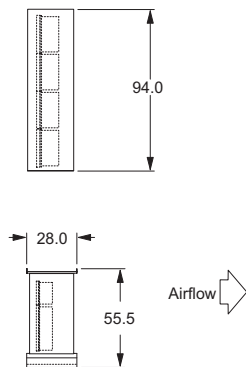


Position J — Final Filter Section — RDS 800C

Figure 53: Final Filter Section (28") for Units w Cooling Only and/or Steam or Hot Water Heat

Final filter section (28") for units with cooling only and/or steam or hot water heat

□ 95% Efficiency - 24.0 sq.ft.

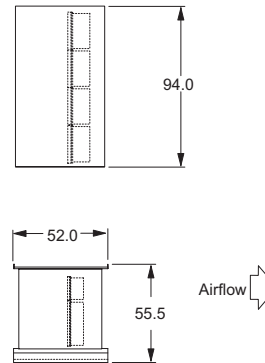


Filter quantity & size
4 - 24 x 24 x 12
4 - 12 x 24 x 12

Figure 55: Final Filter Section (52") for Units with Gas or Electric Heat

Final filter section (52") for units with gas or electric heat

□ 95% Efficiency - 24.0 sq.ft.



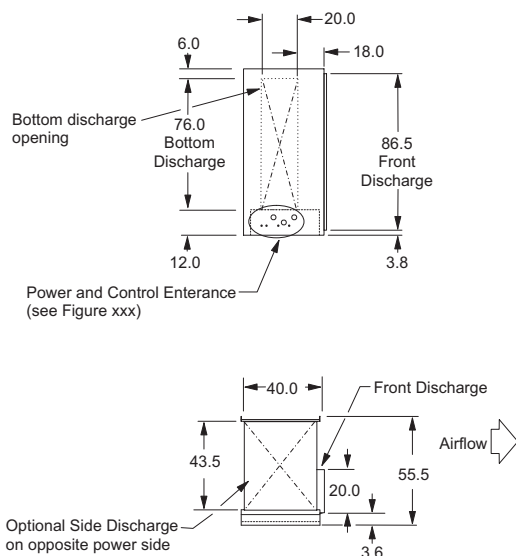
Filter quantity & size
4 - 24 x 24 x 12
4 - 12 x 24 x 12

Position K — Discharge Plenum — RDS 800C

Figure 54: Discharge Plenum

Discharge Plenum

- Bottom discharge
- Side discharge
- Front discharge

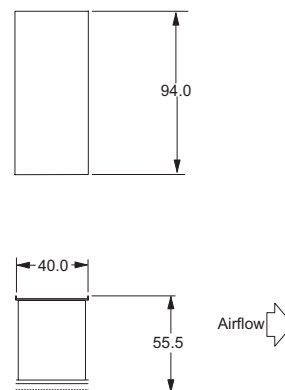


Position L — Blank Compartment Section — RDS 800C

Figure 56: Blank Compartment

Blank compartment

- Out of airstream - 40" section



Note:
Blank compartment requires a discharge plenum with bottom or side discharge in position G.

Roof Curbs — RDS 800C

Figure 57: Roof Curb without Blank Compartment (Out of Airstream)

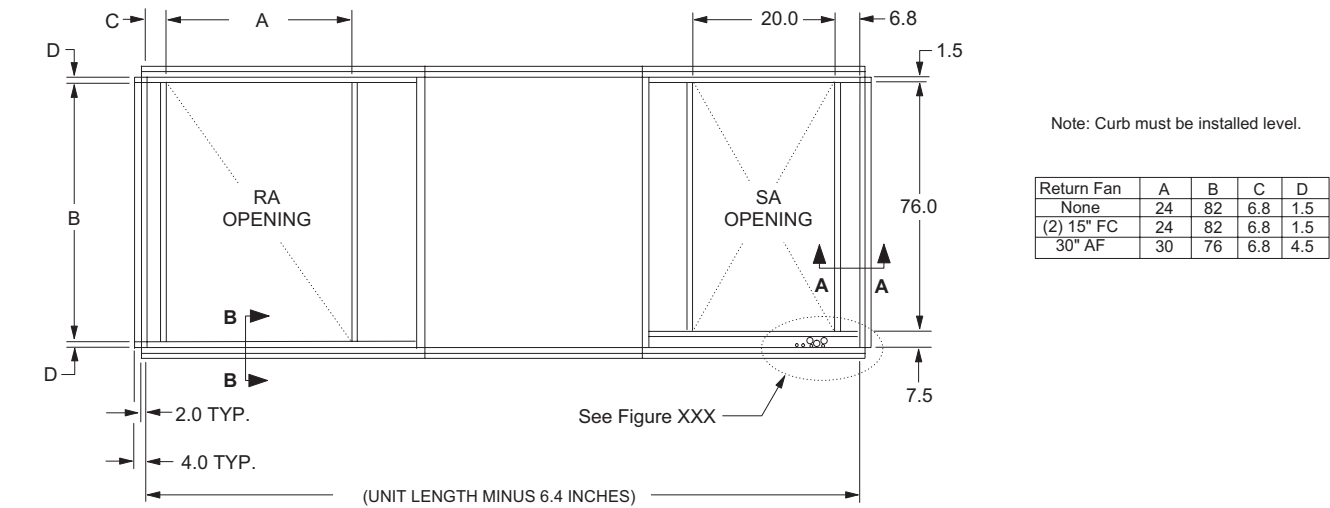


Figure 58: Roof Curb without Blank Compartment (Out of Airstream)

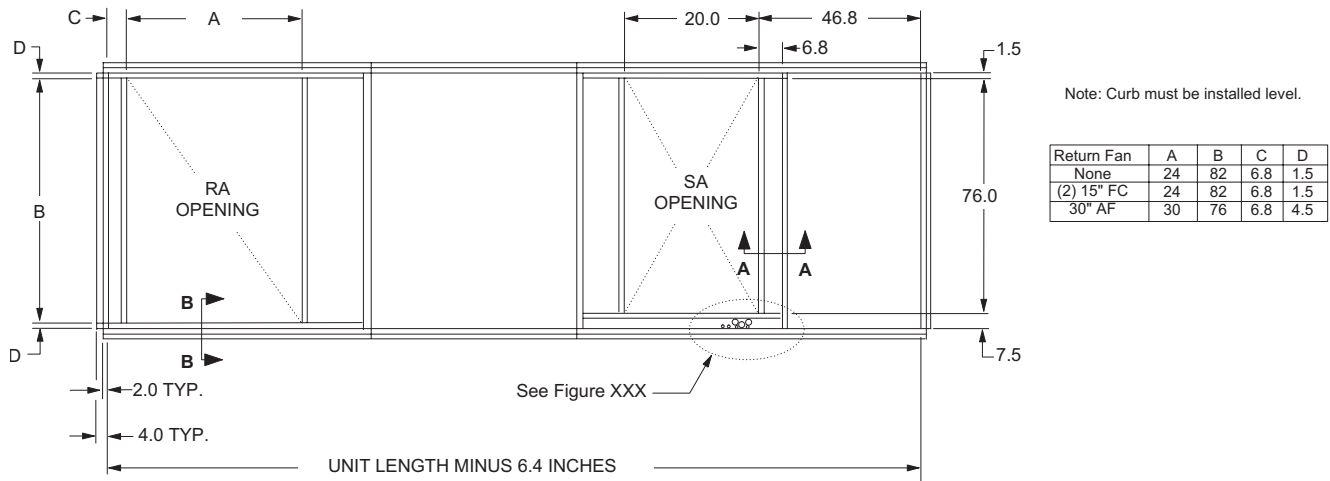
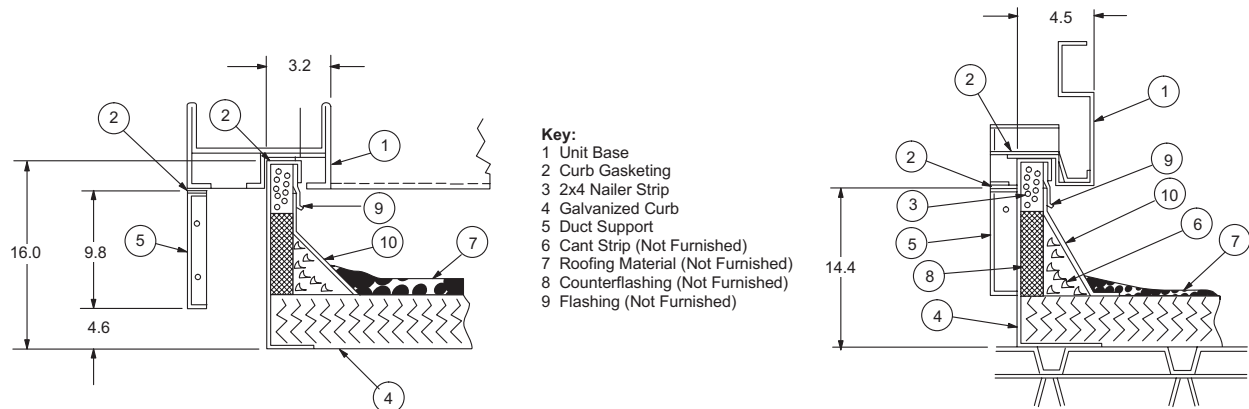


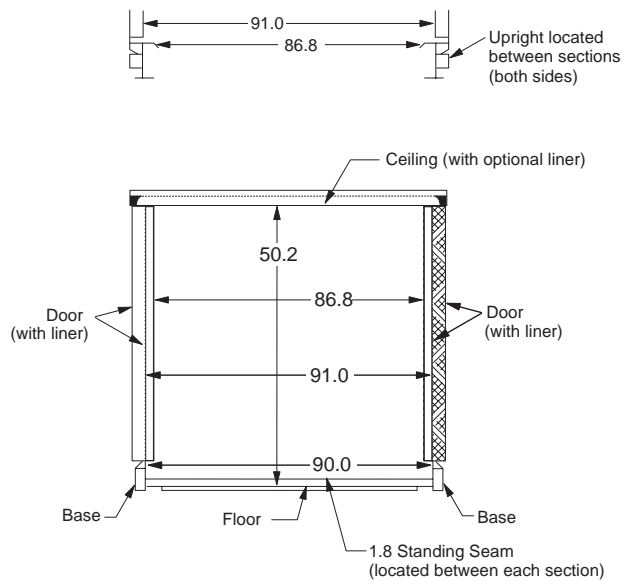
Figure 59: Curb Cross Section A-A Curb Cross Section B-B



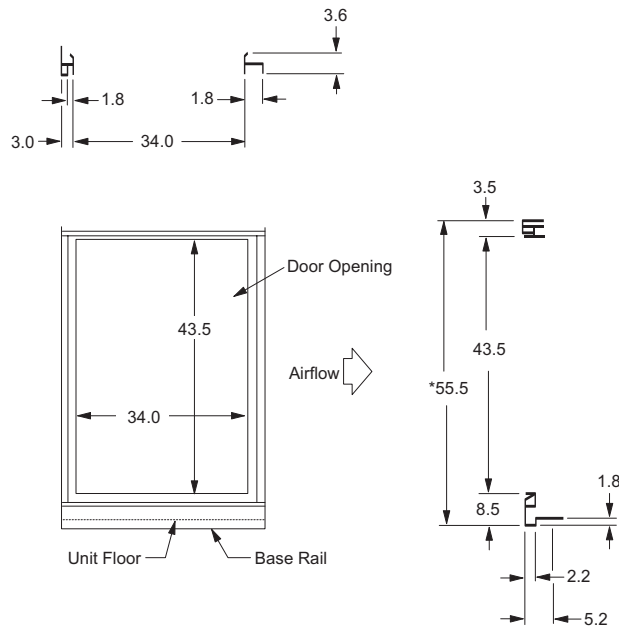
Blank Access and Drain Pan Only Section Detail Drawings — RDS 800C

Figure 60: Cross Section Detail & Access Door Detail

Cross section detail



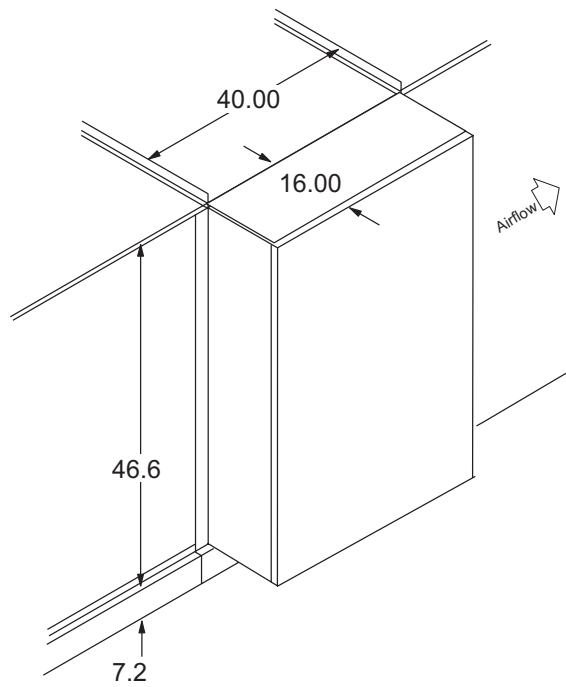
Access door detail



Vestibule detail drawing — RDS 800C

Figure 61: Field Installed Coil Piping Vestibule

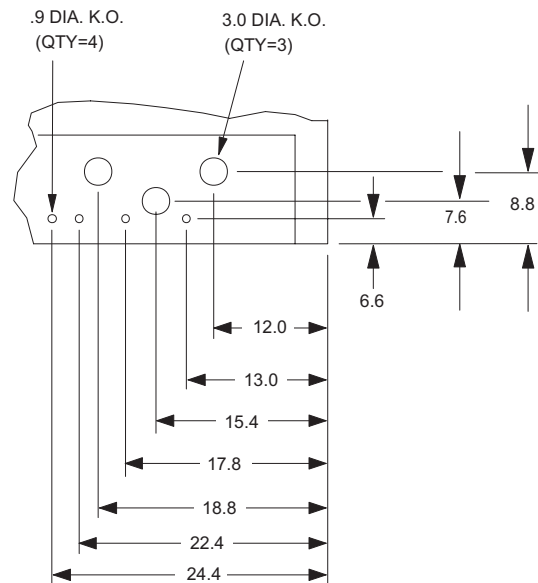
Field installed coil piping vestibule



Electrical knockouts — RDS 800C

Figure 62: Discharge Plenum Wiring Entrance Detail

Discharge plenum wiring entrance detail






































Note:
0.9 diameter and 3.0 diameter knockouts are electrical entrance locations on the unit only.

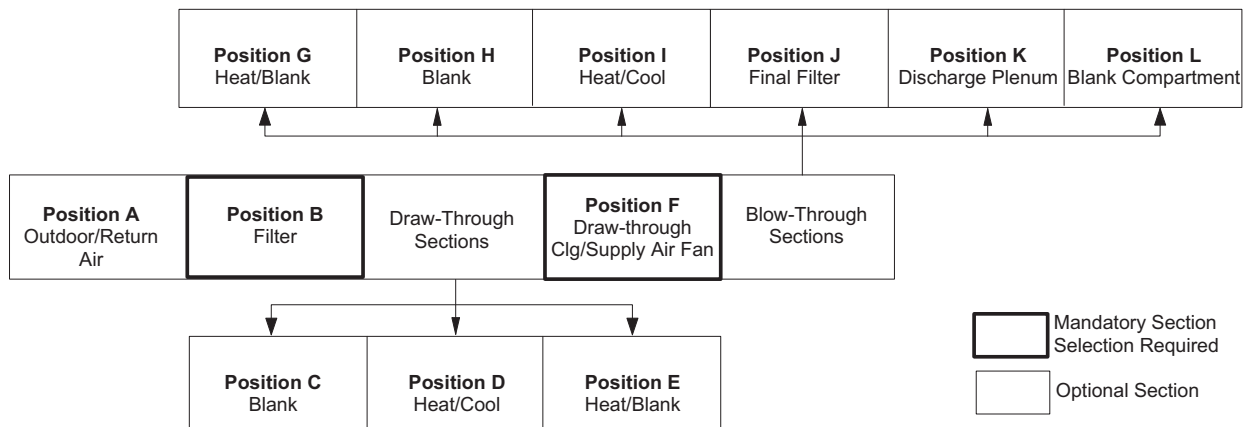
Dimensional Data — RDS 802C

Section options and locations

Figure 63: Section Options and Locations—RDS 802C

Position A	Position B	Position C	Position D	Position E	Position F	Position G	Position H	Position I	Position J	Position K	Position L
OA/RA	Filter	Blank	Draw-thru Heat/Cool	Heat/Blank	Supply Air Fan	Heat/Blank	Blank	Blow-thru Heat/Cool	Final Filter	Discharge Plenum	Blank Comp.
OA hood  0"	Angular  22"	Blank access  40"	Drain pan only  40"	Steam/hot water 20.3 sq ft  40"	24" diameter.  62"	Steam/hot water 20.3 sq ft  40"	Blank access  40"	Drain pan only  40"	With clg only steam or hot water heat 24.0 sq ft  28"	Discharge plenum  40"	Blank compartment (out of airstream)  40"
Plenum  52"	Cartridge 24 sq ft  28"	Blank access  52"	Unit cooling 26.0 sq ft CW 27.3 sq ft DX  40"	Blank access  40"		Electric  40"	Blank access  52"	Unit Cooling 26.0 sq ft CW 27.3 sq ft DX  40"	w/Gas or Electric Heat 24.0 sq ft  52"		
30% OA  52"	Blank Access  22"		Unit heating & cooling 21.1 sq ft HT 26.0 sq ft CW 27.3 sq ft DX  40"			Gas 200-1000 MBh  40"		Unit htg/clg 21.1 sq ft HT 26.0 sq ft CW 27.3 sq ft DX  40"	Blank access  28"		
Economizer  52"	Blank access  28"		Contractor htg/clg  40"			Blank access  40"		Contractor htg/clg  40"	Blank access  52"		
Econ. with 30" AF RA fan  52"											
Econ. with 40" AF RA fan  80"									DX = Direct expansion cooling CW = Chilled water cooling HT = Hot water or steam heating		

Section Diagram — RDS 802C



Application Considerations — RDS 802C

Unit Coils

- 1 Unit cooling coils are available in either direct expansion or chilled water type and can be located in the Heat/Cool sections, position D and I.
- 1 Unit chilled water coils are available with or without a factory installed control valve when provided without a combination heating coil.
- 1 Unit heating coils are available in either steam or hot water type and can be located in the Heat/Cool sections, positions D and I, or the Heat sections, positions E and G.
- 1 Unit heating coils are available with or without a factory installed control valve in the Heat sections, positions E and G.

Contractor Coils

- 1 Contractor coils are available in direct expansion, chilled water, steam and hot water type and are located in the Heat/Cool sections, positions D and I.
- 1 Contractor coils are available with or without factory installed face and bypass dampers less actuator.

Electric Heat

- 1 Electric heating coils are located in the Blow-through Heat section, position G only.

Gas Heat

- 1 A gas heating furnace is located in the Blow-through Heat section, position G only.

Final Filters

- 1 Final filters are not available with a drain pan only or any option with a cooling coil located in the Blow-through Heat/Cool section, position I.

Blank Access Compartment

- 1 The blank access compartment is available on units with a discharge plenum in position K with bottom or side discharge only.

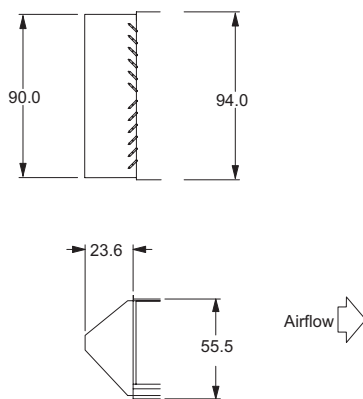
General

- 1 When any section is located in position H (Blank Access section), I (Blow-through Heat/Cool section), or J (Final Filter section), a heating or blank section must be placed in position G to provide proper airflow diffusion for the sections that follow the supply air fan.

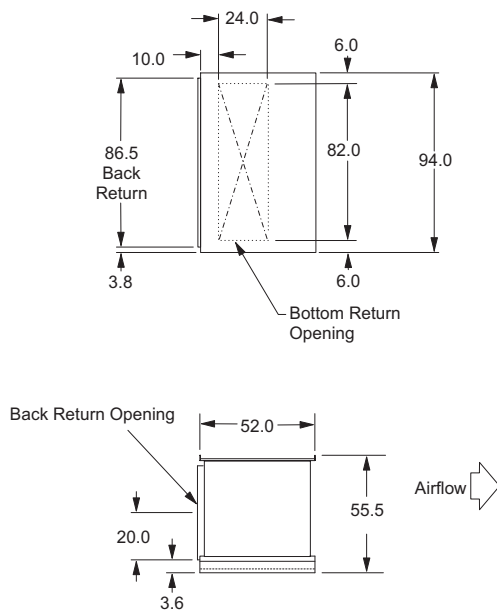
Position A — Outdoor/Return Air Section — RDS 802C

Figure 64: Outside Air Hood & Return Air Plenum

100% Outdoor air hood
☐ With dampers
☐ Without dampers



Return Air Plenum
☐ Bottom return
☐ Back return

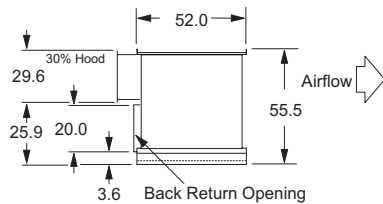
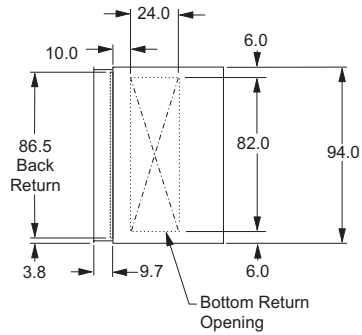


Note: This option does not affect unit curb length

Position A — Outdoor/Return Air Section — RDS 802C (continued)

Figure 65: Return Air Plenum with 30% Outside Air Hood & Economizer

Return Air Plenum with 30% outside air hood
☐ Bottom return
☐ Back return



Economizer
☐ Bottom return
☐ Back return

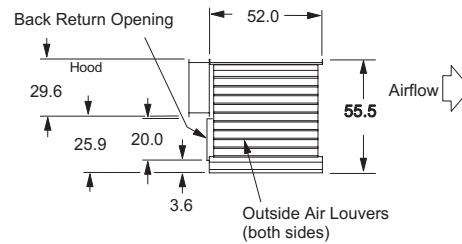
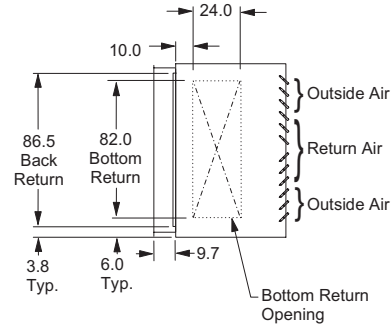


Figure 66: Economizer with Return Air Fan

Economizer with return air fan
☐ 1 - 30" Airfoil with back return
☐ 1 - 30" Airfoil with variable inlet vanes with back return

Option:
☐ With light, receptacle and switch

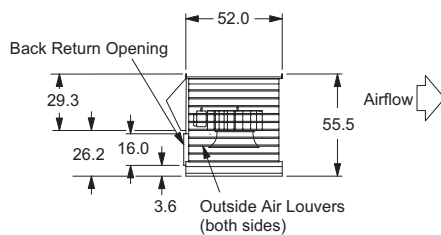
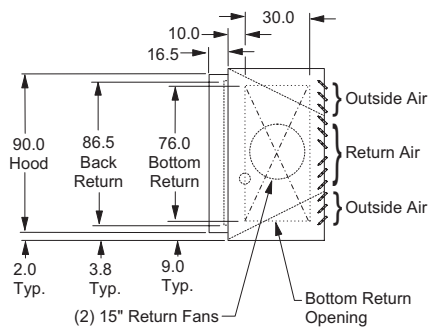
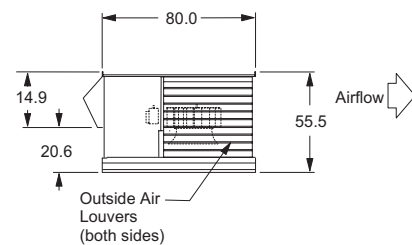
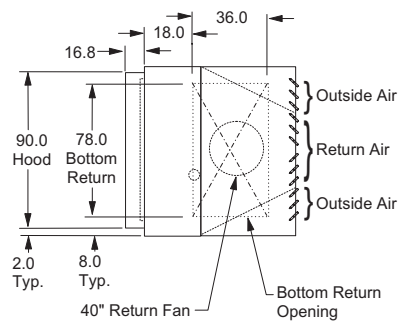


Figure 67: Economizer with Return Air Fan

Economizer with return air fan
☐ 1 - 40" Airfoil with bottom return
☐ 1 - 40" Airfoil with variable inlet vanes with back return

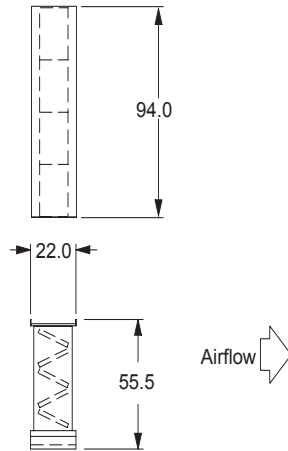
Option:
☐ With light, receptacle and switch



Position B — Draw-through Filter Section — RDS 802C — *mandatory selection*

Figure 68: Angular Filters

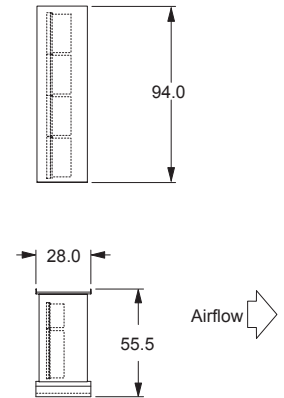
- Angular filters
- ☐ Throwaway
 - ☐ 30% Efficiency



Filter quantity & size
10 - 16 x 25 x 2
10 - 16 x 20 x 2

Cartridge Filter with Pre-filter

- Cartridge filter with prefilter
- ☐ 65% Efficiency - 24 sq.ft. (2.23m²)
 - ☐ 95% Efficiency - 24 sq.ft. (2.23m²)



Filter quantity & size
4 - 24 x 24 x 12
4 - 12 x 24 x 12

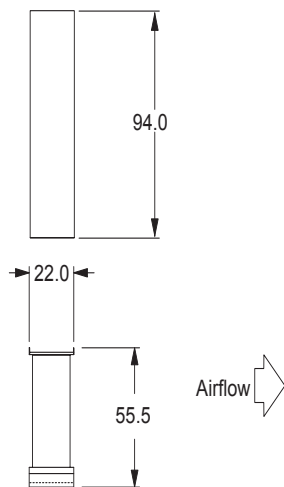
Blank Access Sections — Positions B, C, E G, H and J — RDS 802C

Figure 69: Blank Access Sections

- Blank access section
- ☐ Blank - 22" section

Selection location:

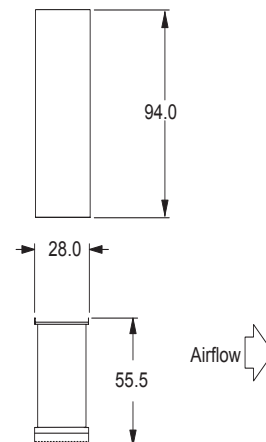
- ☐ Position B - Draw-through filter section



- Blank access section
- ☐ Blank - 28" section

Selection location: (1)

- ☐ Position B - Draw-through filter section
- ☐ Position J - Final filter section (2)



Notes:

- (1) This section may be located in one or more of the locations listed above.
- (2) Blank access section in position J requires a blank or heat section in position G.

Blank Access Sections — Positions B, C, E G, H and J — RDS 802C

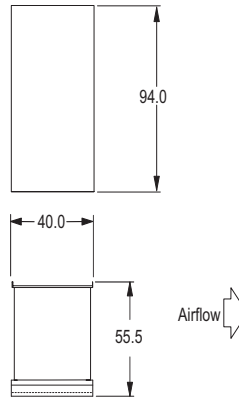
Figure 70: Blank Access Sections

Blank access section

- ☐ Blank - 40" section

Selection locations: (1)

- ☐ Position C - Draw-through blank access section
- ☐ Position E - Draw-through heat section
- ☐ Position G - Blow-through heat section (includes deffuser)
- ☐ Position H - Blow-through blank access section (2)



Notes:

- (1) This section may be located in one or more of the locations listed above.
- (2) Blank access section in position H requires a blank or heat section in position G.

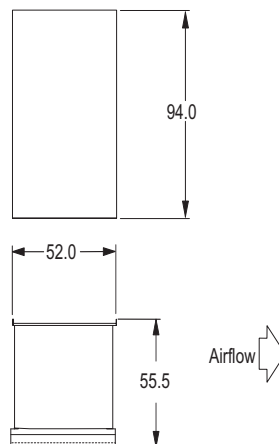
Figure 71: Blank Access Sections

Blank access section

- ☐ Blank - 52" section

Selection locations: (1)

- ☐ Position C - Draw-through blank access section
- ☐ Position H - Blow-through blank access section (2)
- ☐ Position J - Final filter section

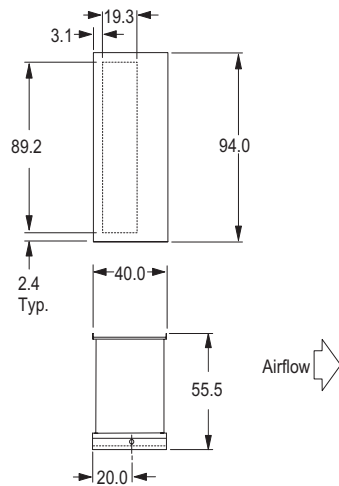


Notes:

- (1) This section may be located in one or more of the locations listed above.
- (2) Blank access section in position H or J requires a blank or heat section in position G.

Figure 72: Drain Pan Only

Drain pan only



Unit Cooling Coil Only

Cooling coil

- ☐ Chilled water (26.0 sq.ft.)
- ☐ Chilled water with 3-way modulating valve and piping (26.0 sq.ft.)
- ☐ DX evaporator (27.3 sq.ft.)

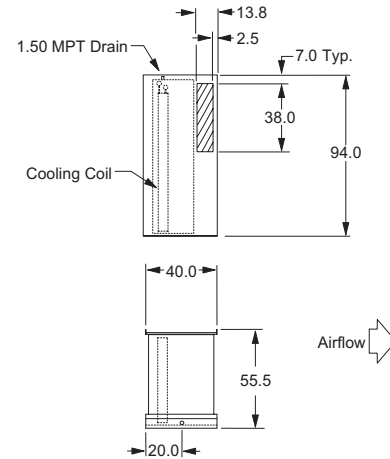


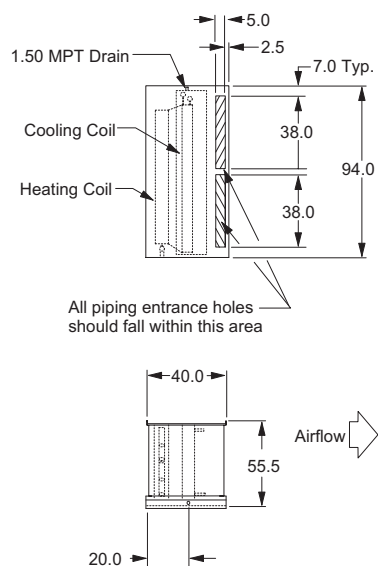
Figure 73: Unit Heating and Cooling

Heating coil (21.1 sq.ft.)

- ☐ Steam
- ☐ Hot water

Cooling coil

- ☐ Chilled water (26.0 sq.ft.)
- ☐ DX evaporator (27.3 sq.ft.)



Contractor Heating and Cooling

Heating coil

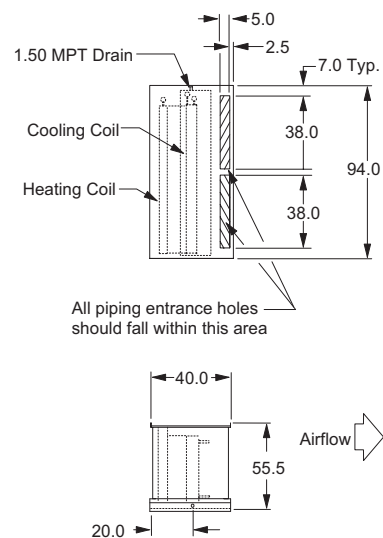
- ☐ Steam
☐ Hot water

Cooling coil

- ☐ Chilled water
☐ DX evaporator

Options

- ☐ With face and bypass damper less actuator



Position E — Draw-Through Only Heat/Cool Section — RDS 802C

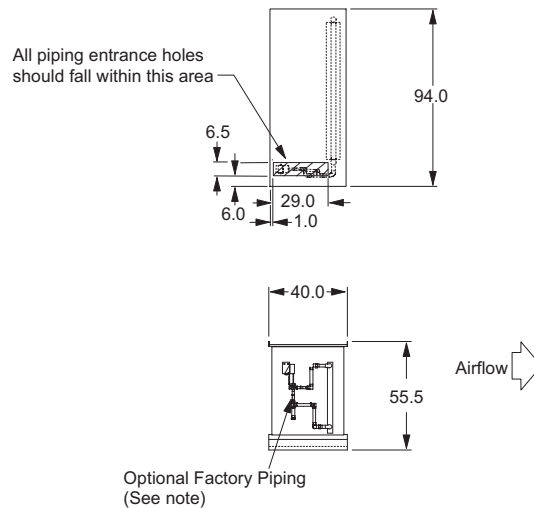
Figure 74: Steam/Hot Water Heat

Steam/hot water heat

- ☐ Steam coil (20.3 sq.ft.)
- ☐ Steam coil with 2-way modulating valve & piping (20.3 sq.ft.)
- ☐ Hot water coil (20.3 sq.ft.)
- ☐ Hot water coil with 3-way modulating valve & piping (20.3 sq.ft.)

Note:

Typical hot water piping shown, see IM178 for typical steam piping.

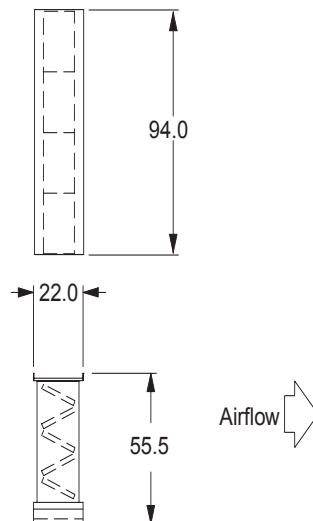


Position F — Supply Air Fan Section — Mandatory Selection — RDS 802C

Figure 75: Supply Air Fan

Angular filters

- ☐ Throwaway
- ☐ 30% Efficiency



Filter quantity & size
 10 - 16 x 25 x 2
 10 - 16 x 20 x 2

Position G — Blow-Through Heat Only Section — RDS 802C

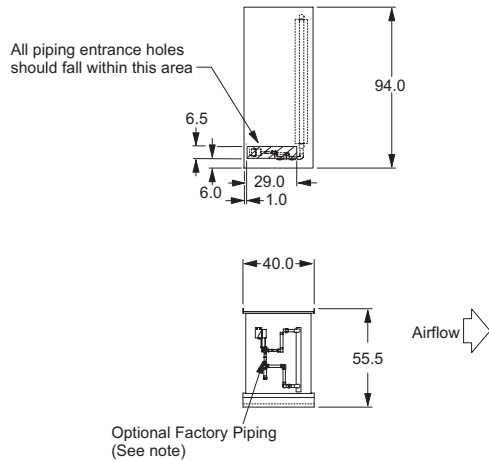
Figure 76: Steam/Hot Water Heat

Steam/hot water heat

- ☐ Steam coil (20.3 sq.ft.)
- ☐ Steam coil with 2-way modulating valve & piping (20.3 sq.ft.)
- ☐ Hot water coil (20.3 sq.ft.)
- ☐ Hot water coil with 3-way modulating valve & piping (20.3 sq.ft.)

Note:

Typical hot water piping shown, see IM178 for typical steam piping.



Electric Heat

Electric heat

- ☐ Electric heat

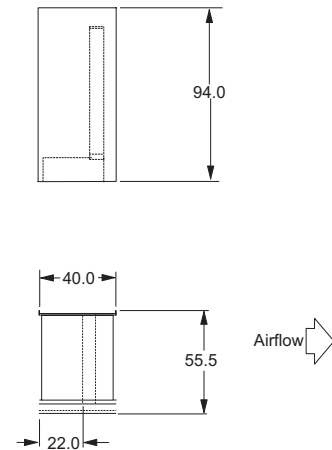
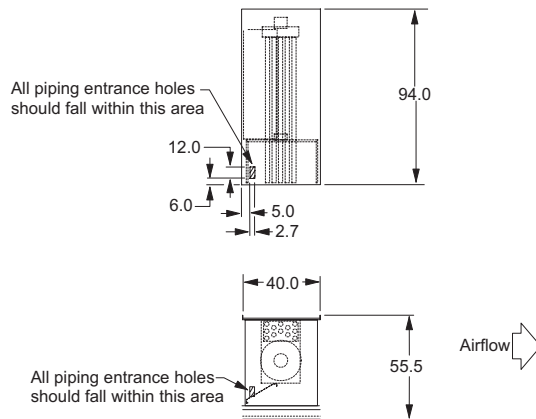


Figure 77: Gas Heat

Gas heat

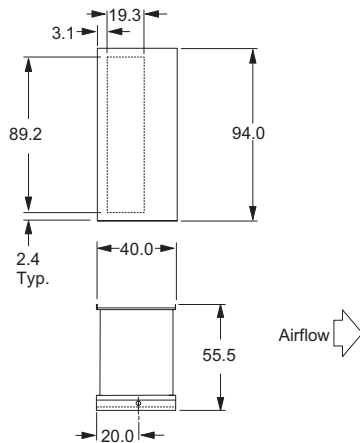
- ☐ Gas heat with controls (200-1000 mbh output)



Position I — Blow-Through Heat/Cool Section — RDS 802C

Figure 78: Drain Pan Only

Drain pan only

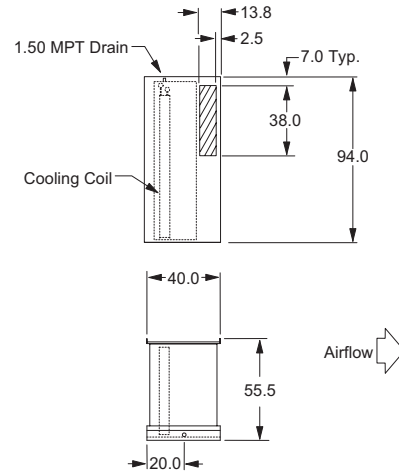


Note:
Blow-through heat/cool section in position I requires a blank or heating section in position G.

Unit Cooling Coil Only

Cooling coil

- ☐ Chilled water (26.0 sq.ft.)
- ☐ Chilled water with 3-way modulating valve and piping (26.0 sq.ft.)
- ☐ DX evaporator (27.3 sq.ft.)



Note:
Blow-through heat/cool section in position I requires a blank or heating section in position G.

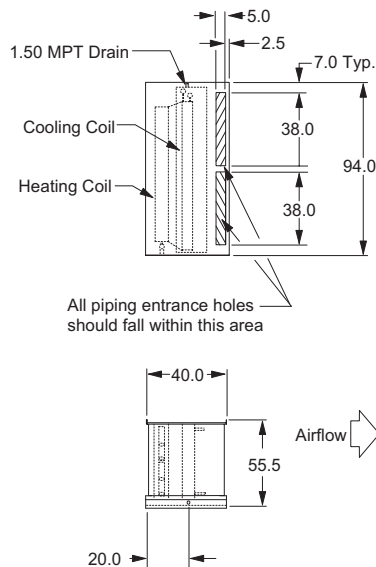
Figure 79: Unit Heating and Cooling

Heating coil (21.1 sq.ft.)

- ☐ Steam
- ☐ Hot water

Cooling coil

- ☐ Chilled water (26.0 sq.ft.)
- ☐ DX evaporator (27.3 sq.ft.)



All piping entrance holes should fall within this area

Contractor Heating and Cooling

Heating coil

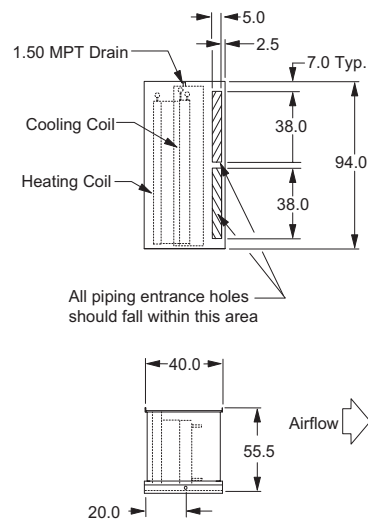
- ☐ Steam
- ☐ Hot water

Cooling coil

- ☐ Chilled water
- ☐ DX evaporator

Options

- ☐ With face and bypass damper less actuator



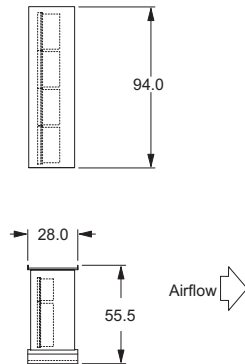
All piping entrance holes should fall within this area

Position J — Final Filter Section — RDS 802C

Figure 80: 28" Section-Cooling Only and/or Steam or Hot Water Heat — 52" Section - with Gas or Electric Heat

Final filter section (28") for units with cooling only and/or steam or hot water heat

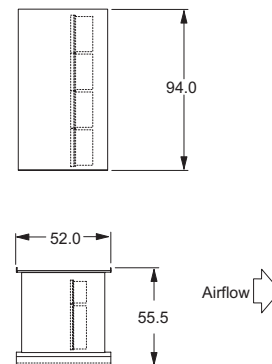
□ 95% Efficiency - 24.0 sq.ft.



Filter quantity & size
4 - 24 x 24 x 12
4 - 12 x 24 x 12

Final filter section (52") for units with gas or electric heat

□ 95% Efficiency - 24.0 sq.ft.



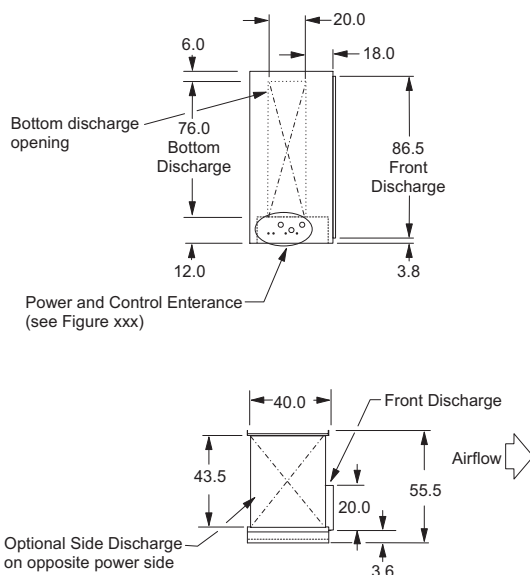
Filter quantity & size
4 - 24 x 24 x 12
4 - 12 x 24 x 12

Position K — Discharge Plenum — RDS 802C

Figure 81: Discharge Plenum

Discharge Plenum

- Bottom discharge
- Side discharge
- Front discharge

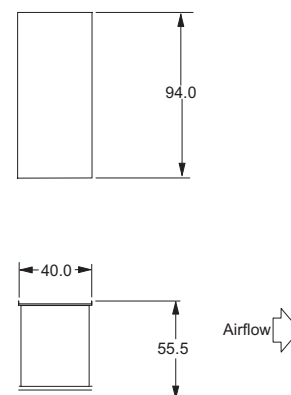


Position K — Blank Compartment Section — RDS 802C

Figure 82: Blank Compartment

Blank compartment

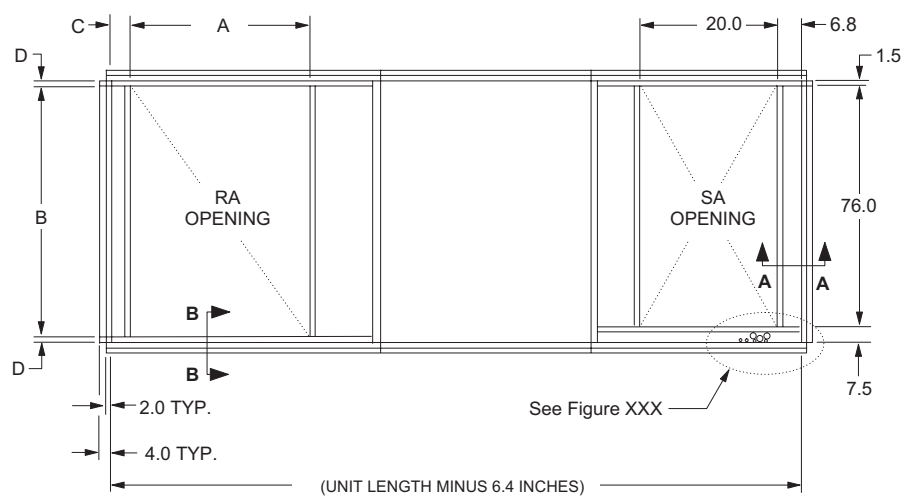
- Out of airstream - 40" section



Note:
Blank compartment requires a discharge plenum with bottom or side discharge in position G.

Roof Curbs — RDS 802C

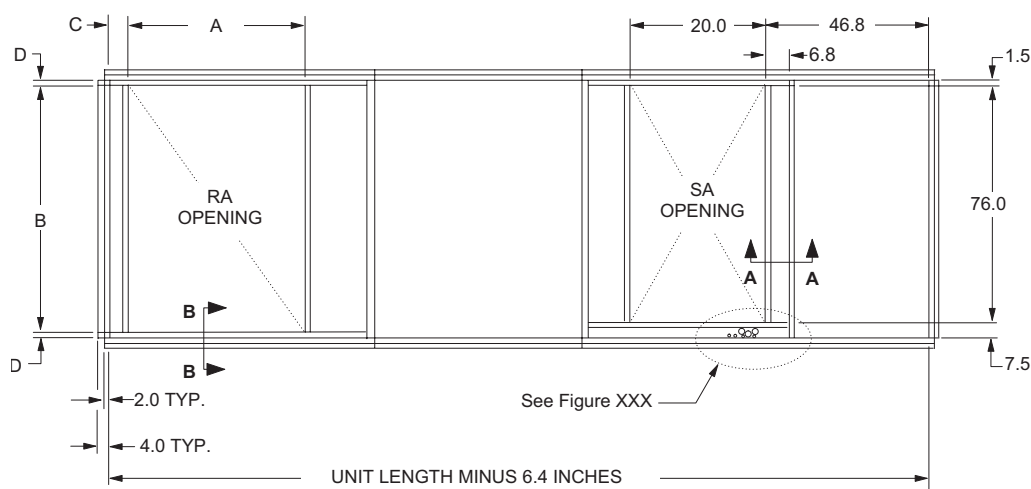
Figure 83: Roof Curb without Blank Compartment (Out of Airstream)



Note: Curb must be installed level.

Return Fan	A	B	C	D
None	24	82	6.8	1.5
30" AF	30	76	6.8	4.5
40" AF	36	78	14.8	3.5

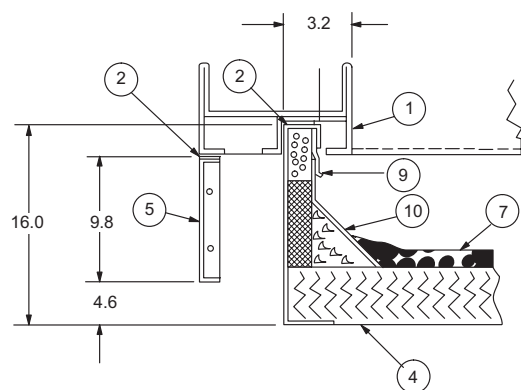
Figure 84: Roof Curb with Blank Compartment (Out of Airstream)



Note: Curb must be installed level.

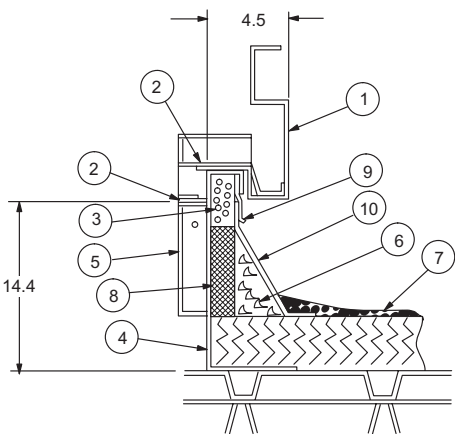
Return Fan	A	B	C	D
None	24	82	6.8	1.5
30" AF	30	76	6.8	4.5
40" AF	36	78	14.8	3.5

Figure 85: Curb Cross Section A-A



- Key:
- 1 Unit Base
 - 2 Curb Gasketing
 - 3 2x4 Nailer Strip
 - 4 Galvanized Curb
 - 5 Duct Support
 - 6 Cant Strip (Not Furnished)
 - 7 Roofing Material (Not Furnished)
 - 8 Counterflashing (Not Furnished)
 - 9 Flashing (Not Furnished)

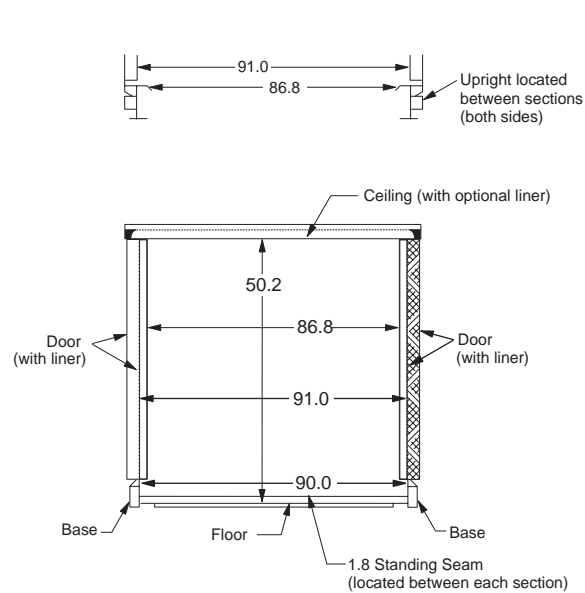
Curb Cross Section B-B



Blank Access and Drain Pan Only Section Detail Drawings

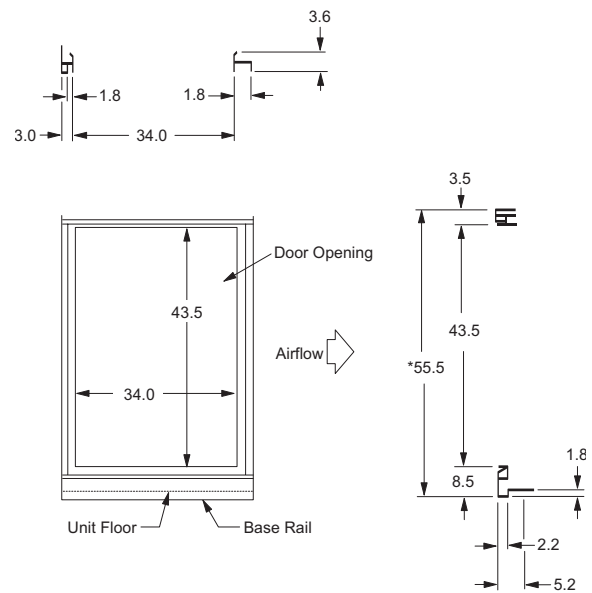
Figure 86: Cross Section Detail

Cross section detail



Access Door Detail

Access door detail

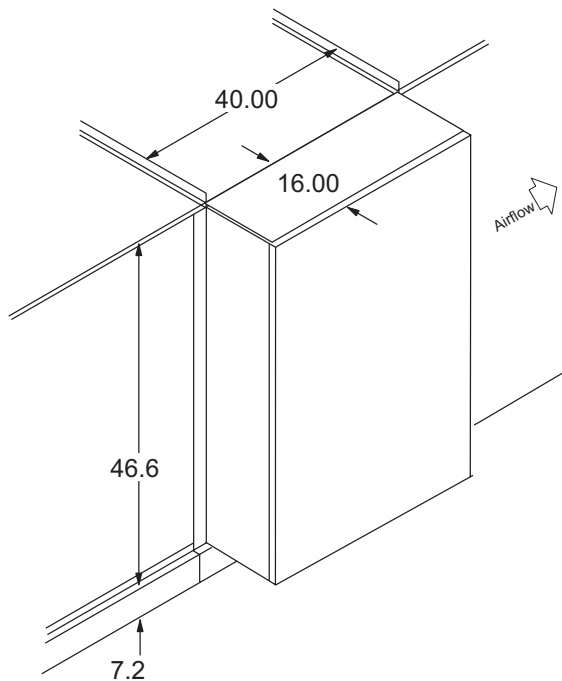


*Cabinet height

Vestibule Detail Drawing

Figure 87: Field Installed Coil Piping Vestibule

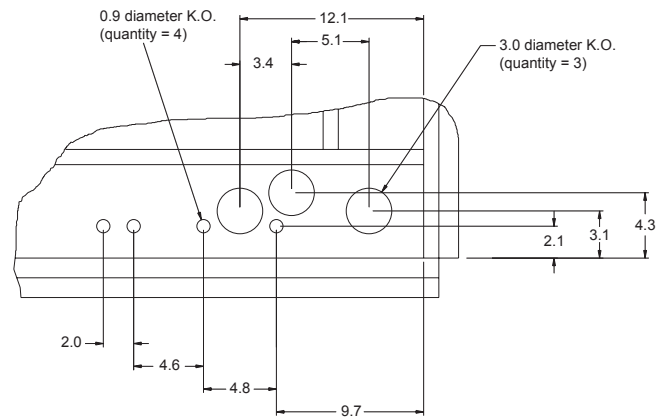
Field installed coil piping vestibule



Note:
Vestibule required for coil piping entering within the curb and recommended for piping entering the side of the unit. Unit cooling coil alone does not require a piping vestibule.

Electrical Knockouts











































Figure 88: Discharge Plenum Wiring Entrance Detail



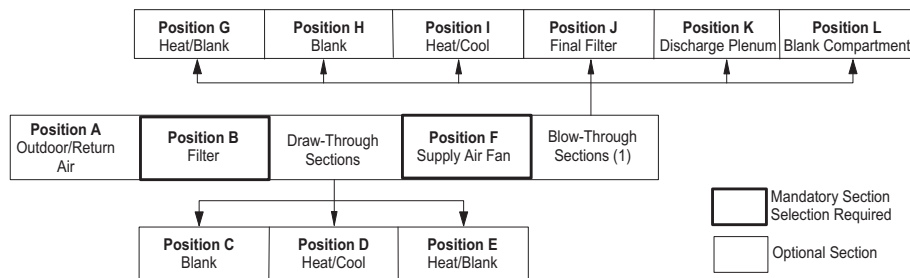
Dimensional Data — RAH047C

Section options and locations

Figure 89: Standard Face Area Coils—RAH 047C











































Position A Outdoor/R eturn Air	Position B Filter	Position C Blank	Position D Heat/Cool	Position E Heat/Blan k	Position F Supply Air Fan	Position G Heat/Blan k	Position H Blank	Position I Heat/Cool	Position J Final Filter	Position K Disch. Plenum	Position L Blank Comp.
Outside air hood  0"	Angular  24"	Blank access  48"	Drain pan only  48"	Steam/hot water 29.7 sq ft  48"	DWDI 27" diameter  72"	Steam/hot water 29.7 sq ft  48"	Blank access  48"	Drain pan only  48"	Cartridge 40 sq ft  48"	Discharge plenum  48"	Blank compartment (out of airstream)  72"
Plenum  48"	Cartridge 40 sq ft  24"		Cooling 38.0 sq ft CW 40.1 sq ft DX  48"	Blank Access  48"	30" diameter  72"	Electric  48"		Cooling 38.0 sq ft CW 40.1 sq ft DX  48"	Cartridge 48 sq ft  72"		
30% outside air  48"	Cartridge 48 sq ft  48"		Cooling with face & bypass 27.7 sq ft CW  48"		33" diameter  96"	Gas 200-1000 mbh  48"		Cooling with face & bypass 27.7 sq ft CW  48"	Blank access  48"		
Mixing box  48"	Blank access  24"		Htg/clg 29.7 sq ft HT 38.0 sq ft CW 40.1 sq ft DX  48"		SWSI 40" diameter  72"	Blank access  48"		Htg/clg 29.7 sq ft HT 38.0 sq ft CW 40.1 sq ft DX  48"	Blank access  72"		
Economizer  72"	Blank access  48"		Heating with face & bypass 20.3sq ft HT  48"		44" diameter  72"			Heating with face & bypass 20.3sq ft HT  48"			
Econ. with RA fan  72"	Econ w/prop exh fans, bottom or back ret  72"	Econ w/prop exh and side ret  120"									
DX = Direct expansion cooling CW = Chilled water cooling HT = Hot water or steam heating											

Section Diagram — RAH047C

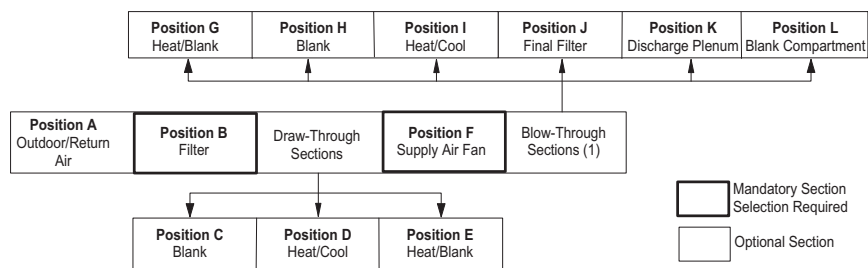


(1) Blow-through sections not available on units with a SWSI supply fan.

Figure 90: Large Face Area Coils—RAH 047C

Position A Outdoor/R eturn Air	Position B Filter	Position C Blank	Position D Heat/Cool	Position E Heat/Blan k	Position F Supply Air Fan	Position G Heat/Blan k	Position H Blank	Position I Heat/Cool	Position J Final Filter	Position K Disch. Plenum	Position L Blank Comp.
OA hood  0"	Angular  24"	Blank access  48"	Cooling 47.4 sq ft DX 45.0 sq ft CW  48"	Steam/hot water 29.7 sq ft  48"	DWDI 27" Diameter  72"	Steam/hot water 29.7 sq ft  48"	Blank access  48"	Cooling 47.4 sq ft DX 45.0 sq ft CW  48"	Cartridge 40 sq ft  48"	Discharge plenum  48"	Blank compartment (out of airstream)  72"
Plenum  48"	Cartridge 40 sq ft  24"		Cooling with face & bypass 45.0 sq ft CW  48"	Blank access  48"	30" diameter  72"	Electric  48"		Cooling with face & bypass 45.0 sq ft CW  48"	Cartridge 48 sq ft  72"		
30% OA  48"	Cartridge 48 sq ft  48"		Htg/Clg 29.7 sq ft HT 47.4 sq ft DX 45.0 sq ft CW  48"		33" diameter  96"	Gas 200–1000 MBh  48"		Htg/Clg 29.7 sq ft HT 47.4 sq ft DX 45.0 sq ft CW  48"	Blank access  48"		
Economizer  72"	Blank access  24"		Drain pan only  48"		SWSI 40" diameter  72"	Blank access  48"		Drain pan only  48"	Blank access  72"		
Econ. with 30" FC RA fan  72"	Blank access  48"		Heating with face & bypass 20.3 sq ft HT  48"		44" diameter  72"			Heating with face & bypass 20.3 sq ft HT  48"			
Econ. with (2) 15x15 FC RA fan  48"	Econ w/prop exh fans, bottom or back ret  72"	Econ w/prop exh and side ret  120"									
DX = Direct expansion cooling CW = Chilled water cooling HT = Hot Water or steam heating											

Section Diagram — RAH047C



Unit Considerations — RAH047C

Splitting Units

- 1 All units with DWDI supply fans may be split at the Supply Air Fan section outlet.

Cooling Coils

- 1 Cooling Coils are available in either direct expansion or chilled water type and can be located in the Heat/Cool sections.
- 1 Chilled water cooling coils are available with or without factory installed three-way modulating control valve as well as face and bypass dampers and actuator.
- 1 Factory wired control of cooling coils is limited to one cooling coil section per unit.

Heating Media - Steam/Hot Water

- 1 Heating coils are available in either steam or hot water type and can be located in either the Heat/Cool sections or the Heat sections.
- 1 Heating coils are available with or without factory installed face and bypass dampers and actuator in the Heat/Cool sections. Factory installed control valves are not available on heating coils in the Heat/Cool sections.
- 1 Heating coils are available with or without a factory installed control valve in the Heat sections. Factory installed face and bypass dampers are not available on heating coils in the Heat sections.

Electric Heat

- 1 Electric heating coils can be located in the Blow-through Heat section, position G only on units with a DWDI supply fan

Gas Heat

- 1 A gas heating furnace can be located in the Blow-through Heat section, position G only on units with a DWDI supply fan. Factory wired control of cooling coils is limited to one heating section per unit.

Final Filters

- 1 If final filters are installed, a Discharge Plenum section is required in position K.
- 1 Final filters are not available on units with a SWSI supply fan.
- 1 Final filters are not available on units with a blow-through cooling coil in the Heat/Cool section, position I.

Blank access compartment

- 1 The blank access compartment is available on units with a discharge plenum in position K with bottom or side discharge only.
- 1 The blank access compartment is not available on units with a SWSI supply fan

General

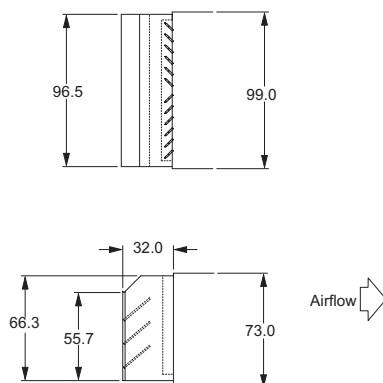
- 1 When any selection is located in position H (Blank access section), I (Blow-through Heat/Cool Section), or J (Final Filter Section) a heating or blank section must be placed in position G to provide proper airflow diffusion for the sections that follow the supply fan

Position A — Outdoor/Return Air Section — RAH047C — Mandatory Selection

Figure 91: Outside Air Hood

100% Outdoor air hood

- ☐ With dampers
- ☐ Without dampers



Note: This option does not affect unit curb length

Return Air Plenum

Return Air Plenum

- ☐ Bottom return
- ☐ Back return

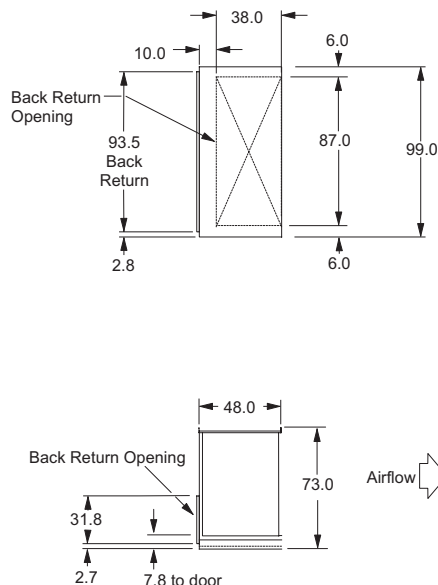


Figure 92: Return Air Plenum with 30% Outside Air Hood Economizer

Figure 92: Return Air Plenum with 30% Outside Air Hood Economizer

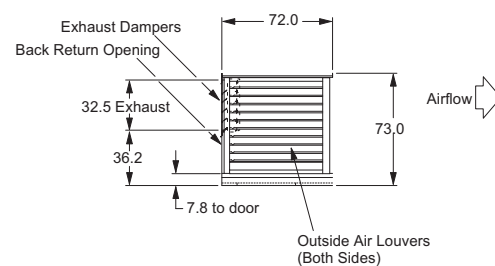
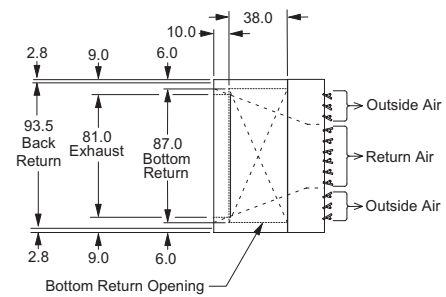
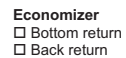
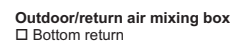
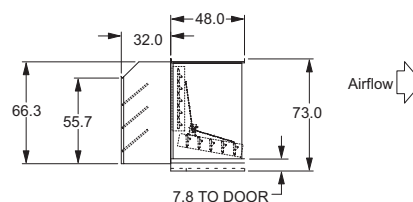
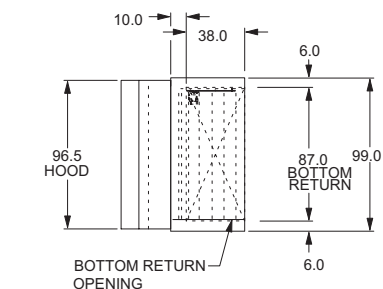


Figure 94: Outdoor/Return Air Mixing Box



☐ With belt guard
☐ With light, receptacle and switch
☐ With light, receptacle, switch and belt guard



Position A — Outdoor/Return Air Section — RAH047C

Figure 95: RAH047C - Back Return Propeller Exhaust Fans (2 Shown)

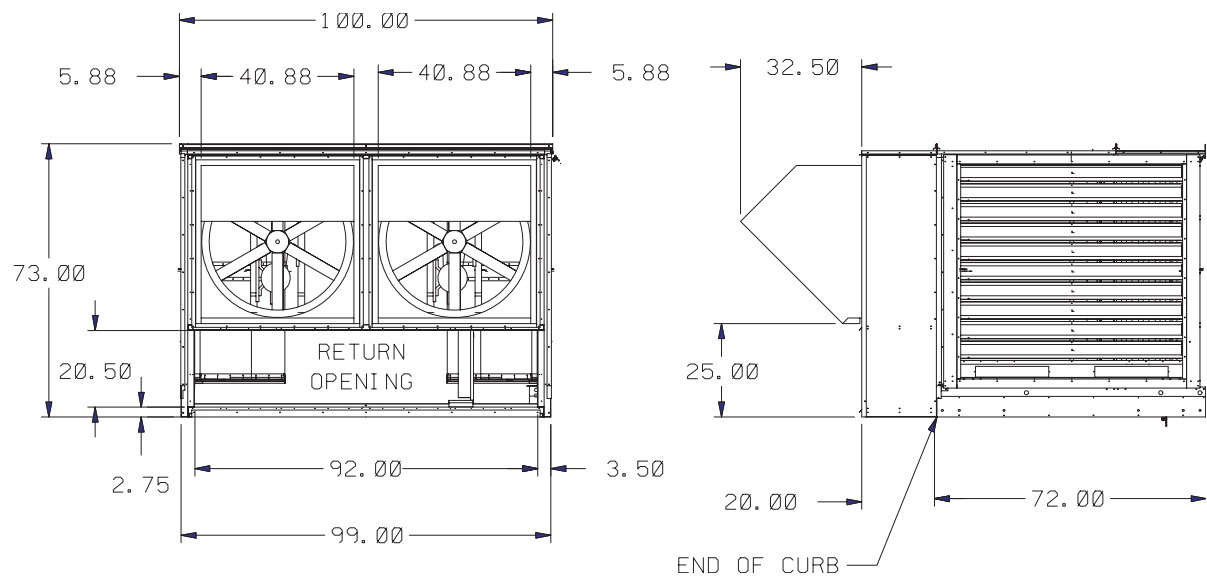
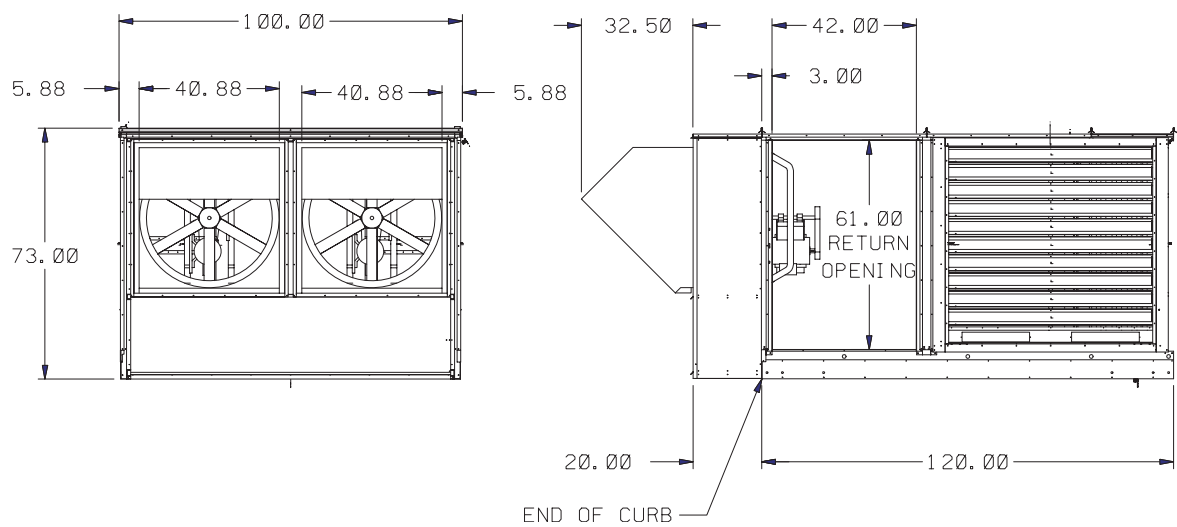


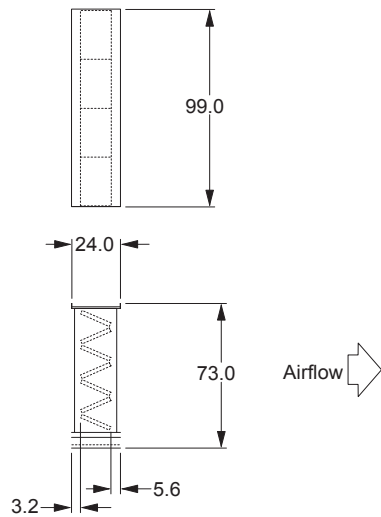
Figure 96: RAH047C - Side Return Propeller Exhaust Fans



Position B — Draw-through Filter Section — RAH047C — *mandatory selection*

Figure 97: Angular Filters 2-Foot Section

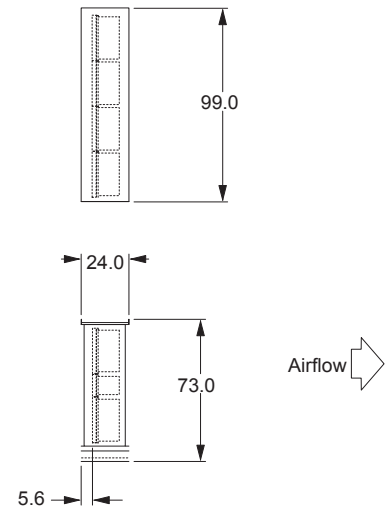
Angular filters - 2-foot section
☐ Throwaway
☐ 30% Efficiency



Filter quantity & size
 7 - 16 x 20 x 2
 21 - 16 x 25 x 2

Cartridge Filter with Pre-Filter 2-Foot Section

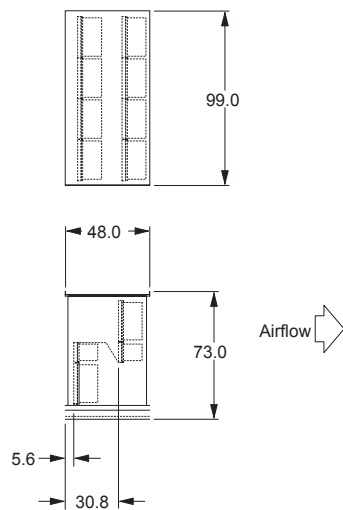
40.0 sq. ft. cartridge with prefilter - 2-foot section
☐ 65% Efficiency
☐ 95% Efficiency



Filter quantity & size
 4 - 12 x 24 x 12
 8 - 12 x 24 x 12

Figure 98: 48.0 sq. ft. Cartridge with Pre-Filters — 4-Foot Section

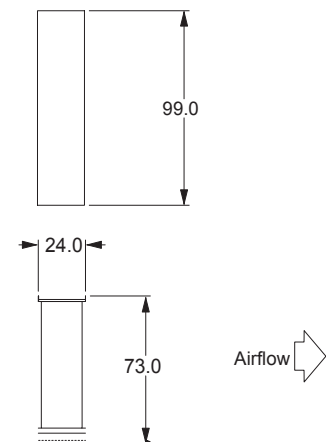
48.0 sq. ft. cartridge with prefilter - 4-foot section
☐ 65% Efficiency - staggered
☐ 95% Efficiency - staggered



Filter quantity & size
 8 - 12 x 24 x 12
 8 - 24 x 24 x 12

Blank Section

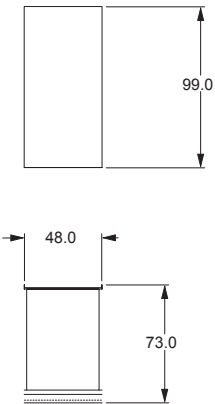
Blank section
☐ Bottom return - 2-foot section



Blank Access Sections — 4 foot section — Positions B, C, E G and H — RAH047C

Figure 99: Section Locations

- Section locations:
- Position B: draw-through filter section
 - Position C: draw-through blank access section
 - Position E: draw-through heat section
 - Position G: blow-through heat section (includes diffuser)
 - Position H: blow-through blank access section (2)

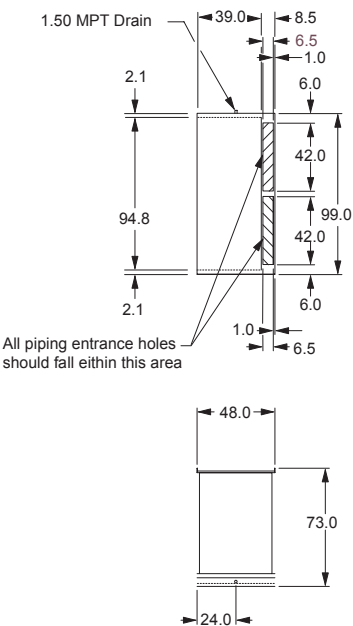


- Notes:
- (1) This section may be located in one or more of the locations listed above.
 - (2) Blank Access section in position G and H not available on units with a SWSI supply fan.
 - (3) Blank Access section in position H requires a blank or heat section in position G.

Heat/Cool Section — Drain Pipe Only — Positions D or I

Figure 100: Section Location

- Section locations
- Position D - draw-through
 - Position I - blow-through (2)



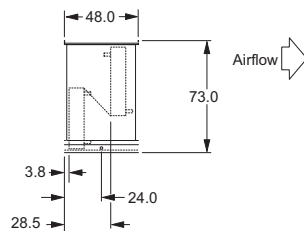
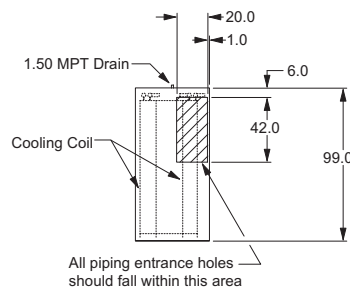
- Notes:
- (1) Heat/Cool section in position I not available on units with a SWSI supply fan.
 - (2) Drain pan only section in position I requires a blank or heat section in position G.

Position D — Draw-Through Heat/Cool Section — Large Face Area Coil — RAH047C

Figure 101: Cooling Unit Only - Staggered

Cooling coil only - staggered

- ☐ Chilled water without valve & piping (45.0 sq.ft.)
- ☐ Chilled water with 3-way modulating valve & piping (45.0 sq.ft.)
- ☐ DX evaporator (47.4 sq.ft.)



Cooling Coil with Face & Bypass Damper - Staggered

Cooling coil with face & bypass damper - staggered

- ☐ Chilled water without valve & piping (45.0sq.ft.)
- ☐ Chilled water with 3-way modulating valve & piping (45.0 sq.ft.)

Damper acuator

- ☐ With damper acuator
- ☐ Without damper acuator

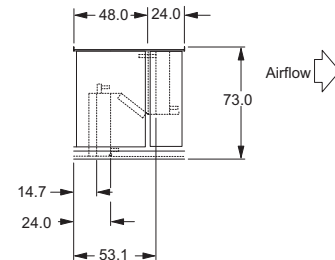
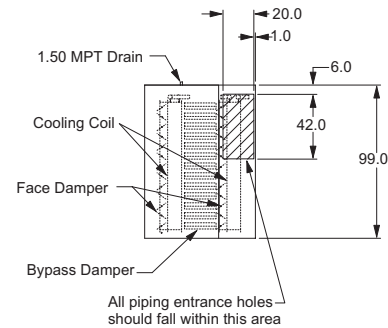


Figure 102: Combination Heating & Cooling

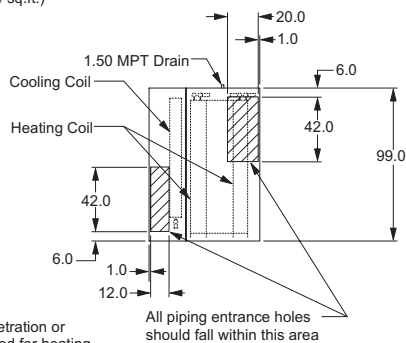
Combination heating and cooling

Heating coil (21.7 sq.ft.)

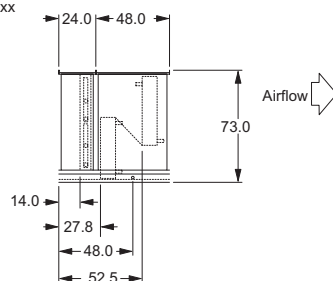
- ☐ Steam coil without valve and piping
- ☐ Hot water coil without valve and piping

Cooling coil

- ☐ Chilled water without valve & piping (45.0 sq.ft.)
- ☐ Chilled water with 3-way modulating valve & piping (45.0 sq.ft.)
- ☐ DX evaporator (47.4 sq.ft.)



Note:Door penetration or vestibule required for heating coil connection. See Figure xxx for vestibule details.



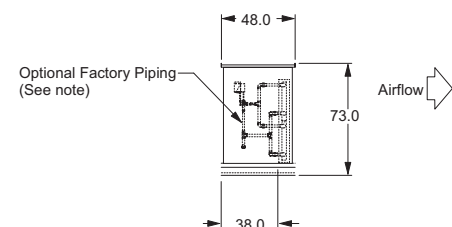
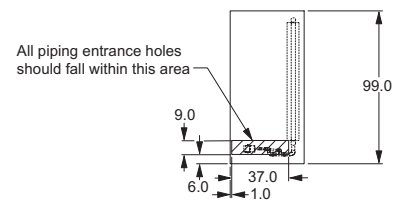
Position E — Draw-Through Only Heat/Cool Section — RAH047C Heating Only Section

Figure 103: Heating Only Section

Heating only section

- ☐ Hot water coil without valve & piping (29.7 sq.ft.)
- ☐ Hot water coil with 3-way modulating valve & piping (29.7 sq.ft.)
- ☐ Steam coil without valve & piping (29.7 sq.ft.)
- ☐ Steam coil with 2-way modulating valve & piping (29.7 sq.ft.)

Note: Typical hot water piping shown, see IM 487 for typical steam piping.



Position F — Supply Air Fan Section — Mandatory Selection — RAH047C

Figure 104: Supply Air Fan — DWDI

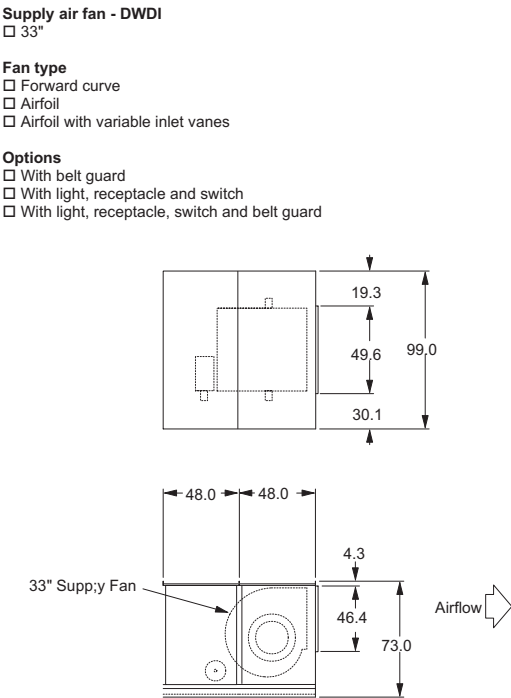
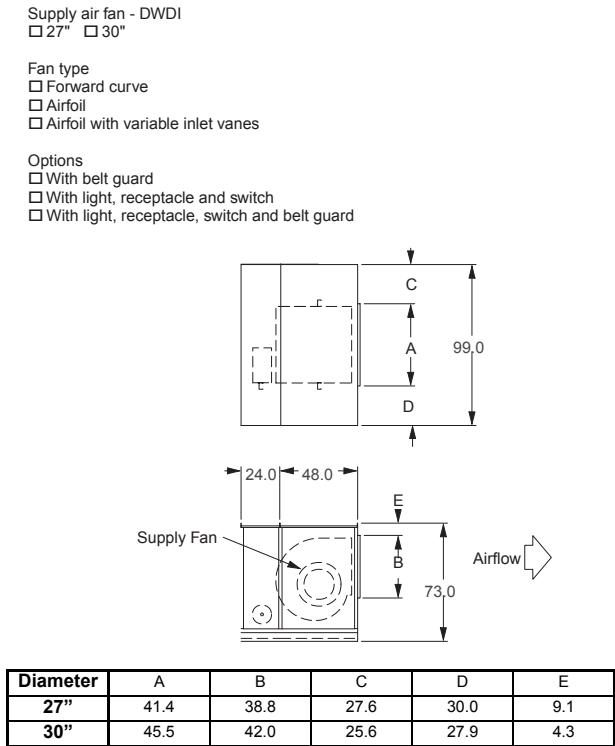
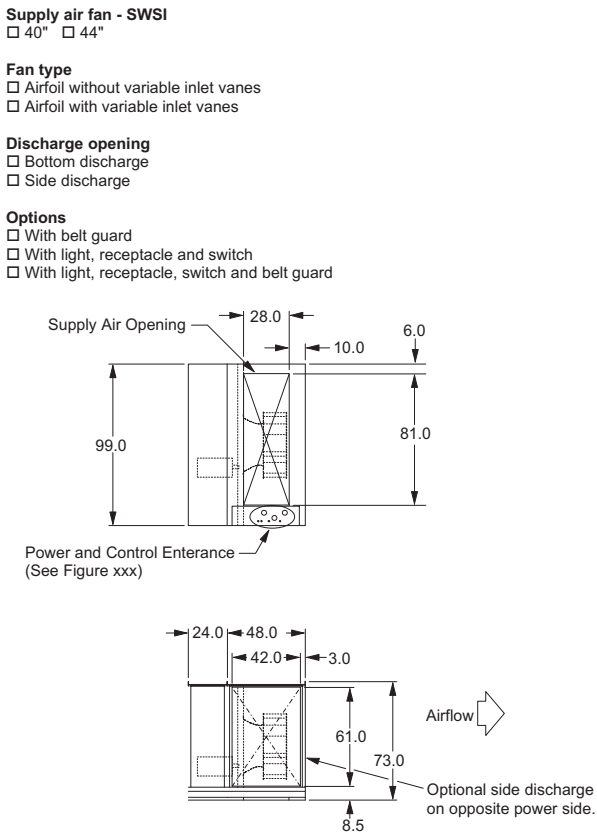


Figure 105: Supply Air Fan — SWSI



Position G — Blow-Through Heat Only Section — RAH047C

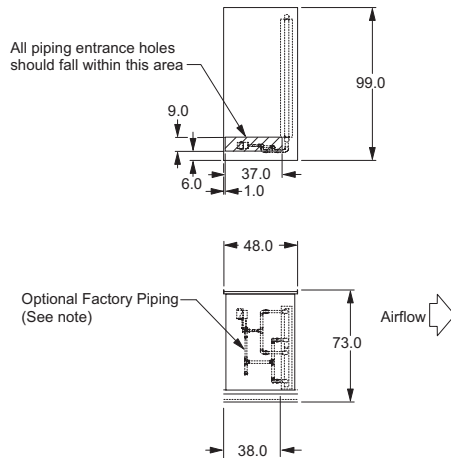
Figure 106: Heat Only Section

Heating only section

- ☐ Hot water coil without valve & piping (29.7 sq.ft.)
- ☐ Hot water coil with 3-way modulating valve & piping (29.7 sq.ft.)
- ☐ Steam coil without valve & piping (29.7 sq.ft.)
- ☐ Steam coil with 2-way modulating valve & piping (29.7 sq.ft.)

Note: Typical hot water piping shown, see IM 487 for typical steam piping.

See Note on bottom of page.



Heating only section

- ☐ Electric heat

See Note on bottom of page.

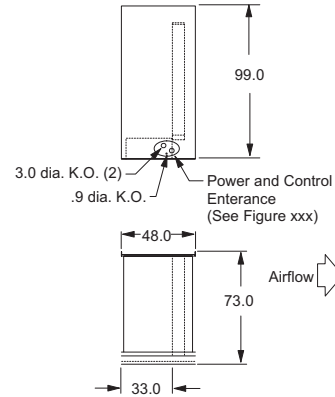
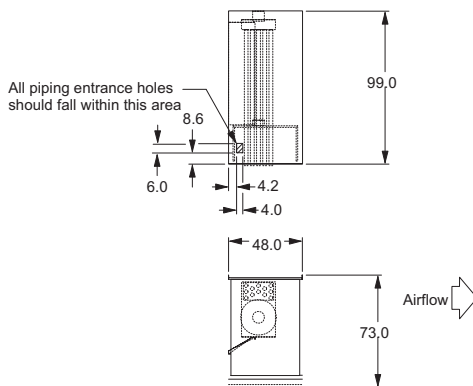


Figure 107: Heat Only Section

Heating only section

- ☐ Gas heat with controls (200 - 1000 MBh output)

See Note on bottom of page.



Note: Heat only section in position G not available on units with a SWSI supply fan.

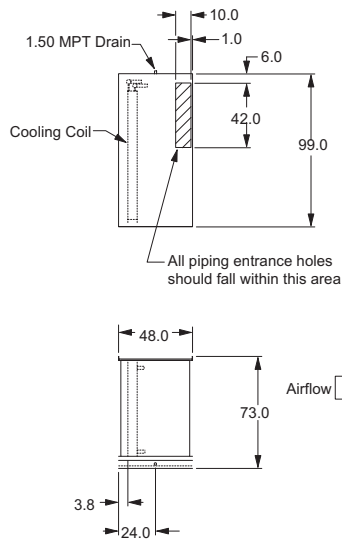
Position I — Blow-Through Heat/Cool Section - Standard Face Area Coils — RAH047C

Figure 108: Cooling Coil Only

Cooling coil only

- ☐ Chilled water without valve & piping (38.0 sq.ft.)
- ☐ Chilled water with 3-way modulating valve & piping (38.0 sq.ft.)
- ☐ DX evaporator (40.1 sq.ft.)

See notes at bottom of page.



Cooling Coil with Face & Bypass Damper

Cooling coil with face & bypass damper

- ☐ Chilled water without valve & piping (27.7 sq.ft.)
- ☐ Chilled water with 3-way modulating valve & piping (27.7 sq.ft.)

Damper acuator

- ☐ With damper acuator
- ☐ Without damper acuator

See notes at bottom of page.

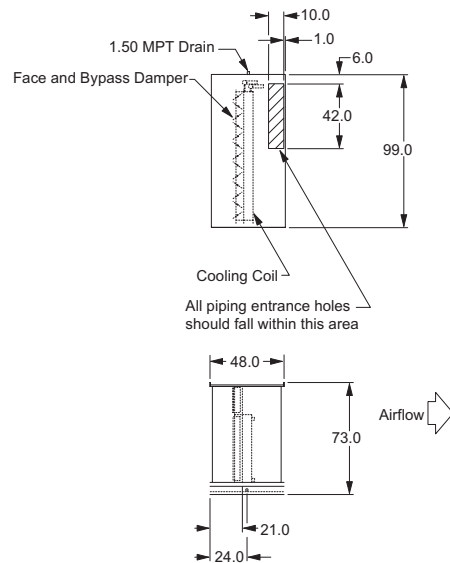


Figure 109: Combination Heating and Cooling

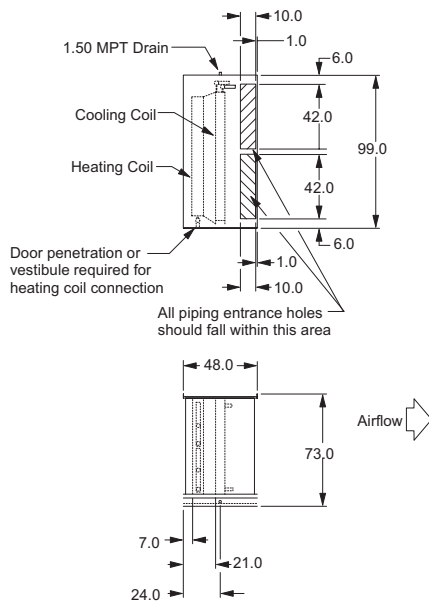
Heating coil (29.7 sq.ft.)

- ☐ Steam coil without valve and piping
- ☐ Hot water coil without valve and piping

Cooling coil

- ☐ Chilled water without valve & piping (38.0 sq.ft.)
- ☐ Chilled water with 3-way modulating valve & piping (38.0 sq.ft.)
- ☐ DX evaporator (40.1 sq.ft.)

See notes at bottom of page.



Heating Coil with Face & Bypass Damper (20.3 sq. ft.)

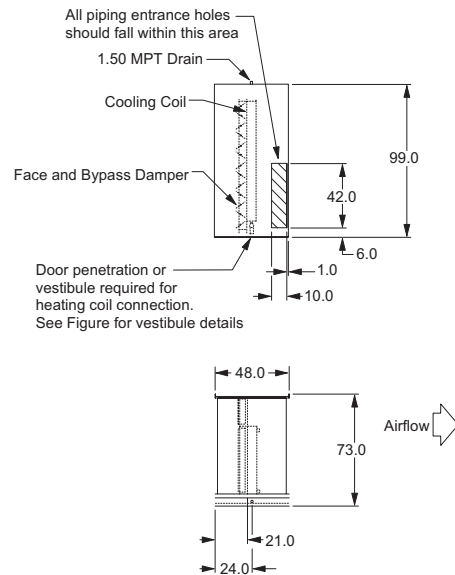
Heating coil with face & bypass damper (20.3 sq.ft.)

- ☐ Steam coil without valve and piping
- ☐ Hot water coil without valve and piping

Damper acuator

- ☐ With damper acuator
- ☐ Without damper acuator

See notes at bottom of page.



Notes: (1) Heat/Cool section in position I not available on units with a SWSI supply fan.

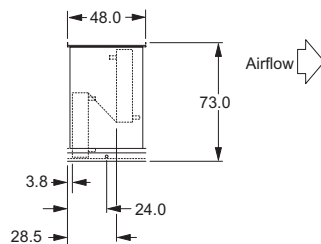
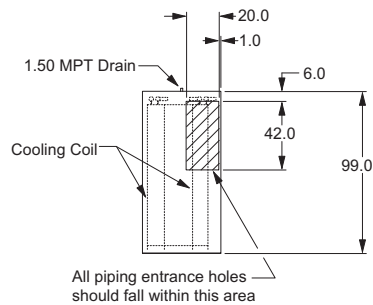
(2) Heat/Cool section in position I requires a blank or heating section in position G.

Position I — Blow-Through Heat/Cool Section Large Face Area Coils — RAH047C

Figure 110: Cooling Coil Only - Staggered

- ☐ Chilled water without valve & piping (45.0 sq.ft.)
- ☐ Chilled water with 3-way modulating valve & piping (45.0 sq.ft.)
- ☐ DX evaporator (47.4 sq.ft.)

See notes at bottom of page.



Cooling Coil with Face & Bypass Damper - Staggered

- ☐ Chilled water without valve & piping (45.0sq.ft.)
- ☐ Chilled water with 3-way modulating valve & piping (45.0 sq.ft.)

Damper acuator

- ☐ With damper acuator
- ☐ Without damper acuator

See notes at bottom of page.

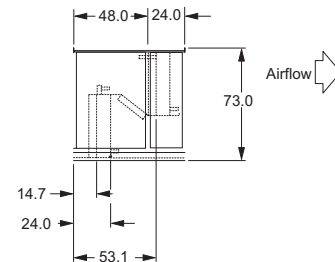
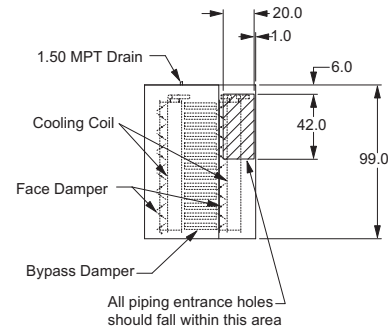


Figure 111: Combination Heating and Cooling

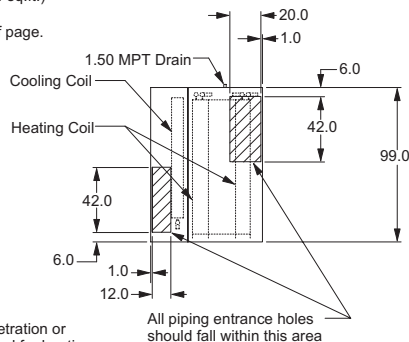
Heating coil (29.7sq.ft.)

- ☐ Steam coil without valve and piping
- ☐ Hot water coil without valve and piping

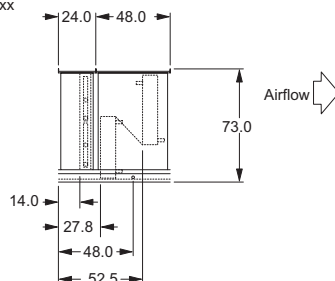
Cooling coil

- ☐ Chilled water without valve & piping (45.0 sq.ft.)
- ☐ Chilled water with 3-way modulating valve & piping (45.0 sq.ft.)
- ☐ DX evaporator (47.4 sq.ft.)

See notes at bottom of page.



Note:Door penetration or vestibule required for heating coil connection. See Figure xxx for vestibule details.



Notes: (1) Heat/Cool section in position I not available on units with a SWSI supply fan.

(2) Heat/Cool section in position I requires a blank or heating section in position G.

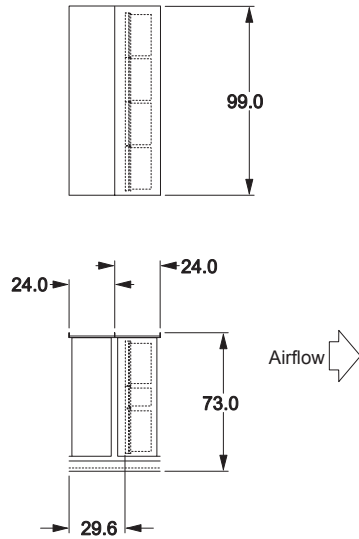
Position J — Final Filter Section — RAH047C

Figure 112: 40 sq. ft. Cartridge - 4 Foot Section

40.0 sq. ft. cartridge - 4 foot section
 □ 95% Efficiency

See notes at bottom of page.

□

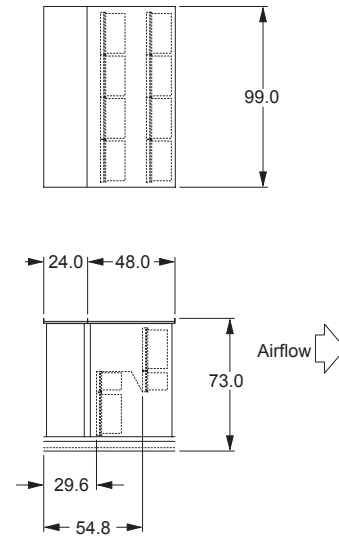


Filter quantity & size
 4 - 12 x 24 x 12
 8 - 24 x 24 x 12

48 sq. ft. Cartridge - 6 Foot Section

40.0 sq. ft. cartridge - 6 foot section
 □ 95% Efficiency - staggered

See notes at bottom of page.

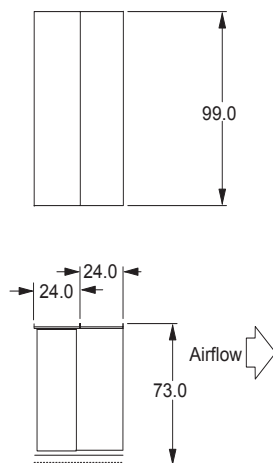


Filter quantity & size
 8 - 12 x 24 x 12
 8 - 24 x 24 x 12

Figure 113: Blank Access Section

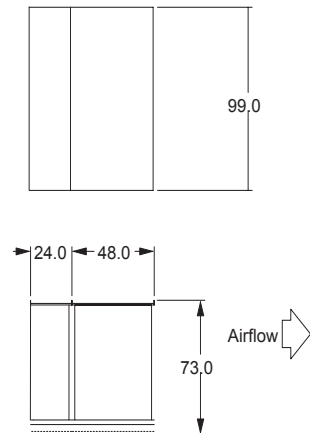
Blank access section
 □ Blank - 4 foot section

See notes at bottom of page.



Blank access section
 □ Blank - 6 foot section

See notes at bottom of page.



Notes:

- (1) Final Filter section not available on units with a SWSI supply fan.
- (2) Final filters are not available on units with a blow-through cooling coil in the Heat/Cool section, position I.
- (3) Final filter option requires a discharge plenum in position K.
- (4) Final filter option requires a blank or heating section in position G.

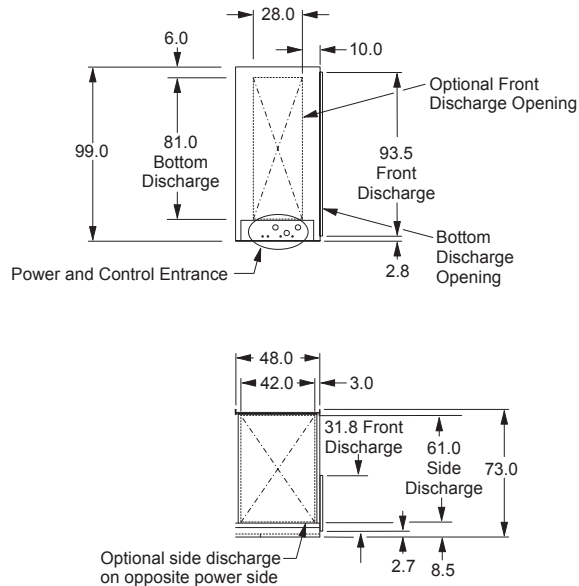
Position K — Discharge Plenum — RAH047C

Figure 114: Discharge Plenum

- Discharge plenum
 - ☐ Bottom discharge
 - ☐ Front discharge
 - ☐ Side discharge

Note:

- (1) Discharge plenum not available with a SWSI supply fan.



Position K — Blank Compartment Section — RAH047C

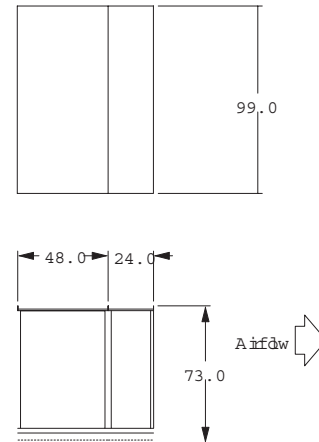
Figure 115: Blank Compartment

Blank compartment

- ☐ Out to stream - 6 foot

Notes:

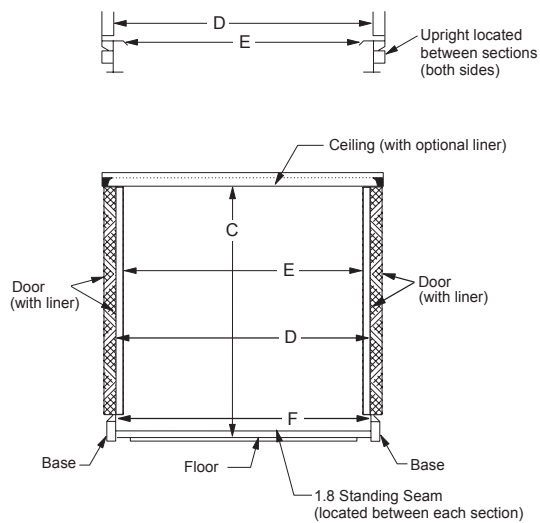
- (1) Blank compartment requires a discharge plenum with bottom or side discharge in position K.
- (2) Blank compartment is available after a SWSI supply fan section.



Blank Access & Drain Pan Only Section Detail Drawings

Figure 116: Cross Section Detail Access Door Detail

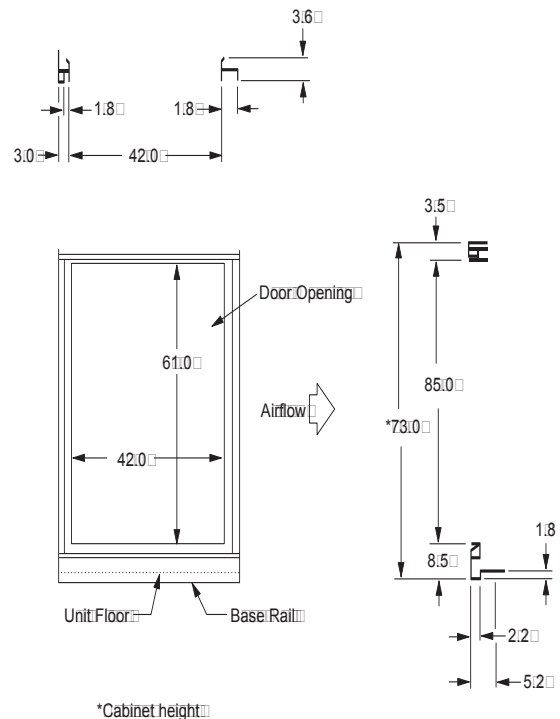
Cross section detail



RAH	C	D	E	F
047C	67.7	96.0	91.8	95.0

- C = Ceiling to floor (with liners)
- D = Door to door (with liners)
- E = Upright to upright, located between sections
- F = Base to base

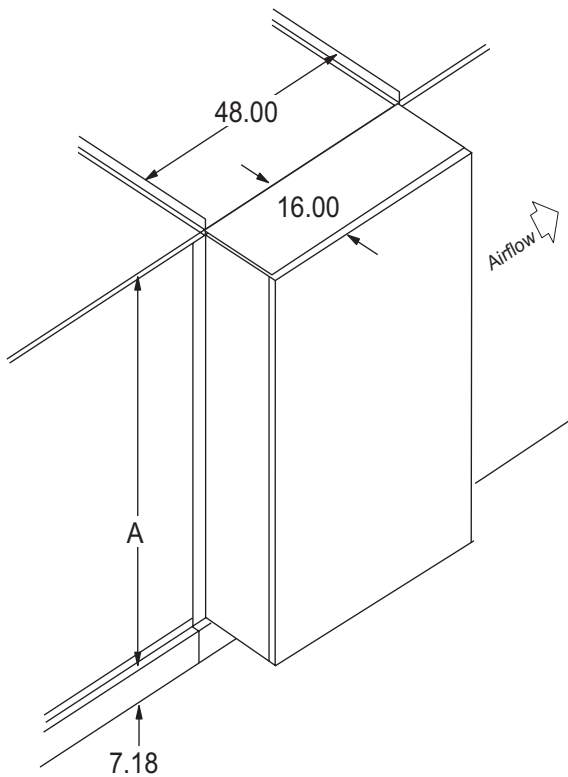
Access door detail



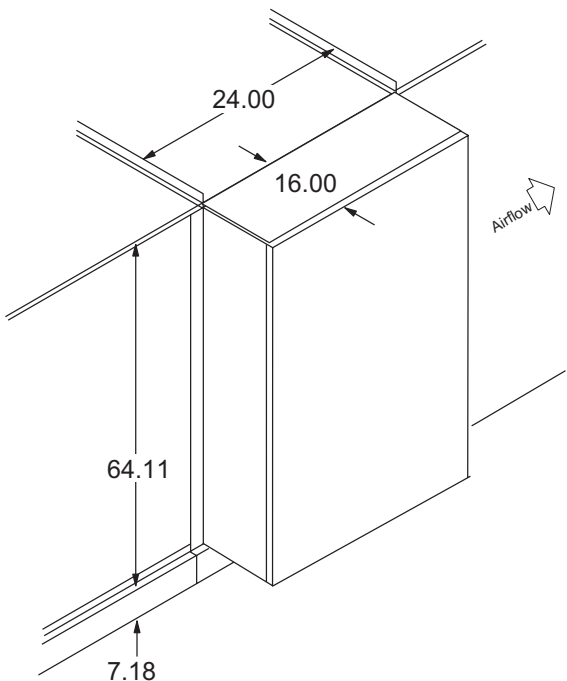
*Cabinet height

Vestibule Detail Drawings

Figure 117: Heat Coil Piping Vestibule — 4 Foot 2 Foot



Heat coil piping vestibule - 2-foot



Roof Curbs — RAH047C

Figure 118: Roof Curb without Blank Compartment

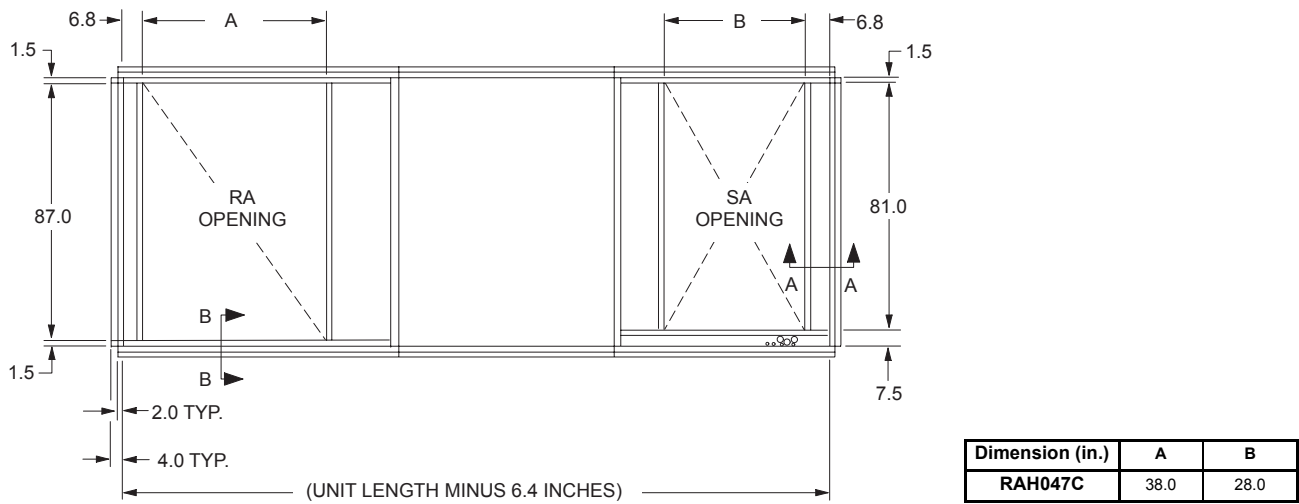


Figure 119: Roof Curb with Blank Compartment

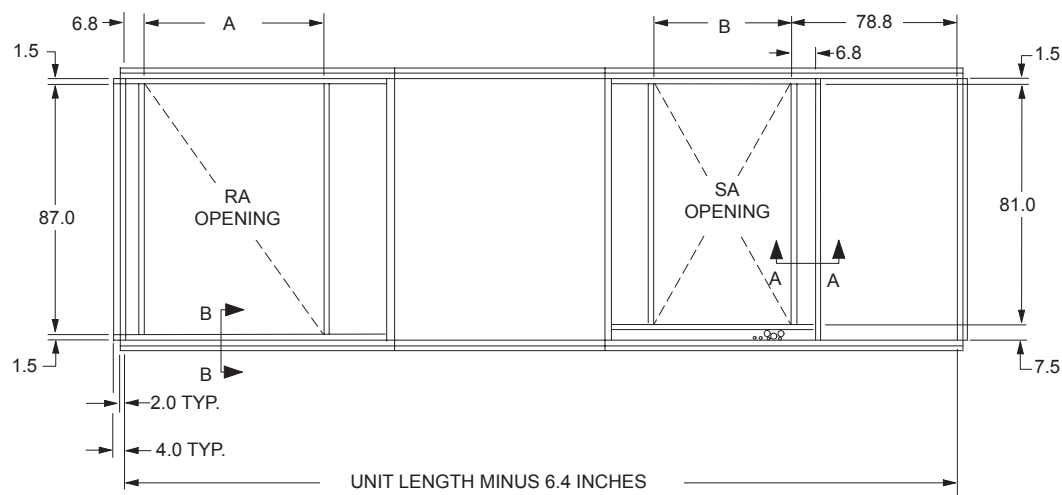
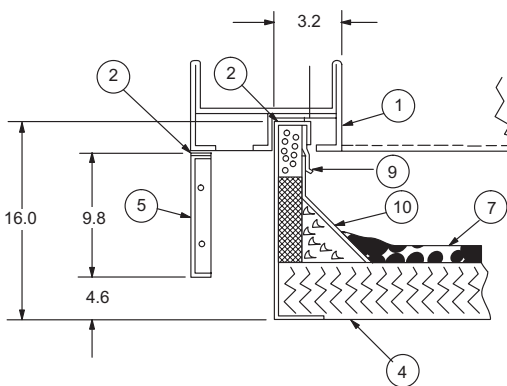
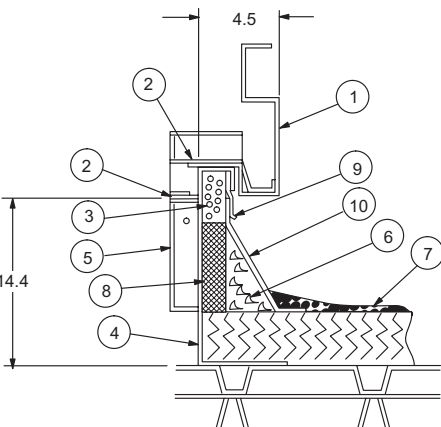


Figure 120: Curb Cross Section A-A



Curb Cross Section B-B



- Key:**
- 1 Unit Base
 - 2 Curb Gasketing
 - 3 2x4 Nailor Strip
 - 4 Galvanized Curb
 - 5 Duct Support
 - 6 Cant Strip (Not Furnished)
 - 7 Roofing Material (Not Furnished)
 - 8 Counterflashing (Not Furnished)
 - 9 Flashing (Not Furnished)

Electrical Knockouts—RAH 047C and 077C

Figure 121: Discharge Plenum Power and Control Wiring Entrance Detail

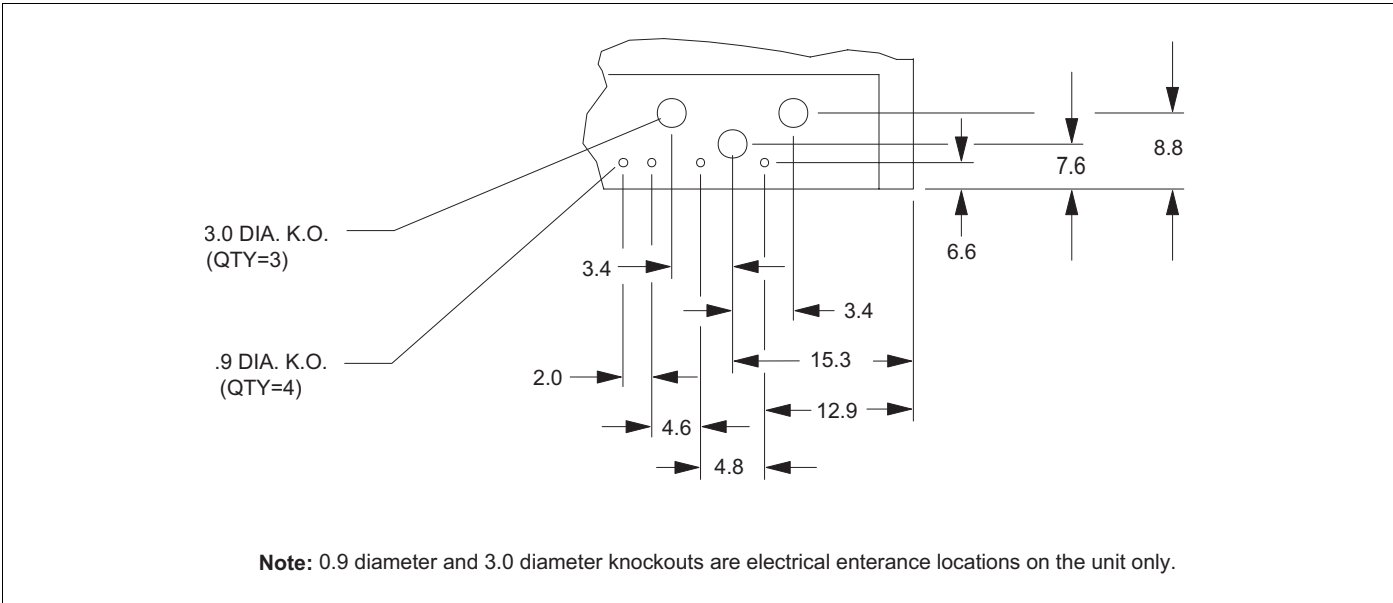
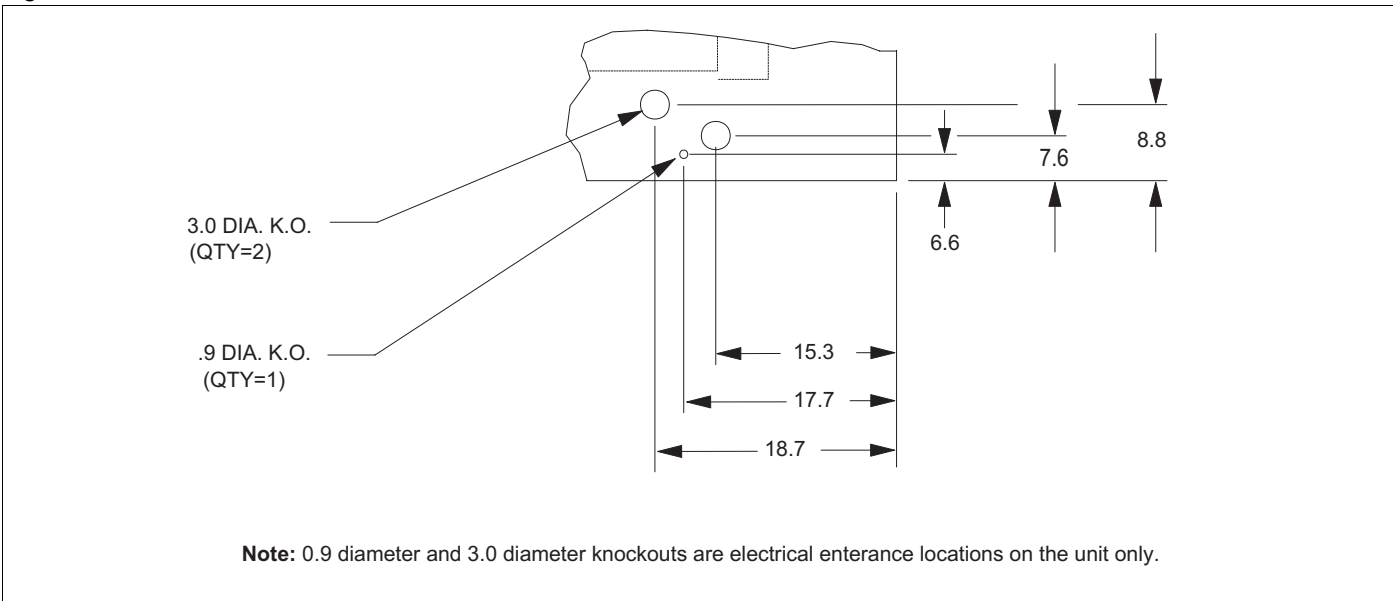


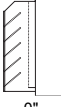
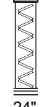


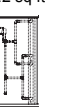
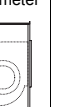

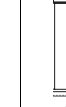

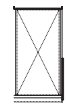
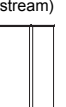


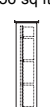
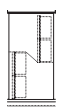
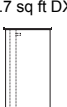
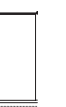
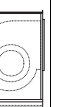
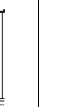




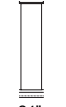
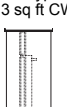
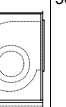





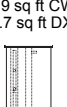
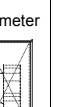
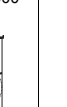




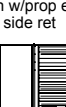
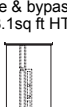
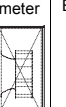

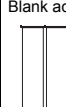

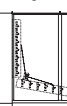

Figure 122: Electric Heat Power and Control Entrance Detail



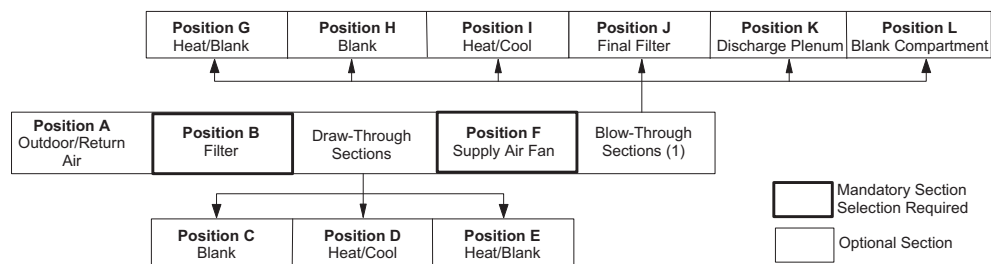
Dimensional Data — RAH077C

Section options and locations

Figure 123: Standard Face Area Coils—RAH 077C

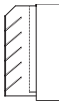
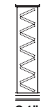

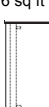

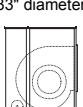
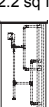
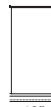
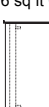
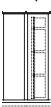
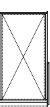
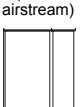

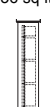
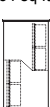
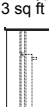

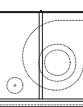

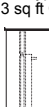
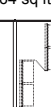
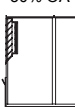
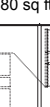
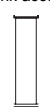

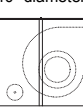


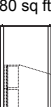


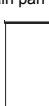




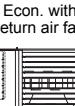
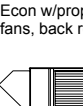
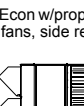
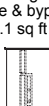
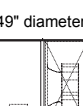

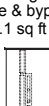

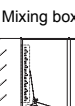

Position A Outdoor/R eturn Air	Position B Filter	Position C Blank	Position D Heat/Cool	Position E Heat/ Blank	Position F Supply Air Fan	Position G Heat/Blank	Position H Blank	Position I Heat/Cool	Position J Final Filter	Position K Disch. Plenum	Position L Blank Comp.
OA hood  0"	Angular  24"	Blank access  48"	Drain pan only  48"	Steam/hot water 42.2 sq ft  48"	DWDI 33" diameter  72"	Steam/hot water 42.2 sq ft  48"	Blank access  48"	Drain pan only  48"	Cartridge 56 sq ft  48"	Discharge plenum  48"	Blank compartment (out of airstream)  72"
Plenum  72"	Cartridge 56 sq ft  24"	Cartridge 64 sq ft  48"	Cooling 51.9 sq ft CW 54.7 sq ft DX  48"	Blank access  48"	36" diameter  96"	Electric  48"		Cooling 51.9 sq ft CW 54.7 sq ft DX  48"	Cartridge 64 sq ft  72"		
30% OA  72"	Cartridge 80 sq ft  72"	Blank access  24"	Cooling with face & bypass 36.3 sq ft CW  48"		40" diameter  96"	Gas 500–1400 MBh  48"		Cooling with face & bypass 36.3 sq ft CW  48"	Cartridge 80 sq ft  96"		
Economizer  96"	Blank Access  48"		Htg/clg 42.2 sq ft HT 51.9 sq ft CW 54.7 sq ft DX  48"		SWSI 44" diameter  72"	Gas 1500–2000 MBh  48"		Htg/clg 42.2 sq ft HT 51.9 sq ft CW 54.7 sq ft DX  48"	Blank access  48"		
Econ. with return air fan  96"	Econ w/prop exh, back ret  72"	Econ w/prop exh, side ret  120"	Heating with face & bypass 28.1sq ft HT  48"		49" diameter  96"	Blank access  48"		Heating with face & bypass 28.1sq ft HT  48"	Blank access  72"		
Mixing box  72"	Econ w/prop exh, bottom return  96"										
DX = Direct expansion cooling CW = Chilled water cooling HT = Hot water or steam heating											

Section Diagram — RAH077C

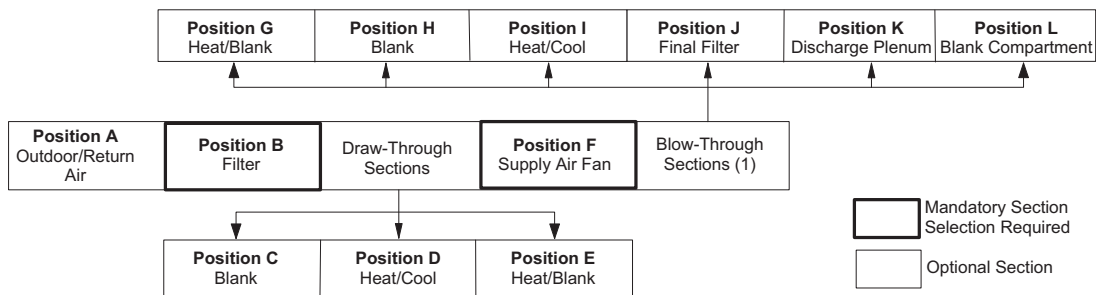


- (1) Blow-through sections not available on units with a SWSI supply fan.
 (2) Burglar bars and isolation dampers not available when there are no sections between the supply fan and the discharge plenum for units with bottom discharge.

Figure 124: Large Face Area Coils—RAH 077C

Position A Outdoor/Return Air	Position B Filter	Position C Blank	Position D Heat/Cool	Position E Heat/Blank	Position F Supply Air Fan	Position G Heat/Blank	Position H Blank	Position I Heat/Cool	Position J Final Filter	Position K Disch. Plenum	Position L Blank Comp.
OA hood  0"	Angular  24"	Blank access  48"	Cooling 76.6 sq ft DX 72.6 sq ft CW  72"	Steam/hot water 42.2 sq ft  48"	DWDI 33" diameter  72"	Steam/hot water 42.2 sq ft  48"	Blank access  48"	Cooling 76.6 sq ft DX 72.6 sq ft CW  72"	Cartridge 56 sq ft  48"	Discharge plenum  48"	Blank compartment (out of airstream)  72"
Plenum  72"	Cartridge 56 sq ft  24"	Cartridge 64 sq ft  48"	Cooling with face & bypass 62.3 sq ft CW  96"	Blank access  48"	36" diameter  96"	Electric  48"		Cooling with face & bypass 62.3 sq ft CW  96"	Cartridge 64 sq ft  72"		
30% OA  72"	Cartridge 80 sq ft  72"	Blank access  24"	Htg/clg 42.2 sq ft HT 76.6 sq ft DX 72.6 sq ft CW  96"		40" diameter  96"	Gas 500-1400 mbh  48"		Htg/clg 42.2 sq ft HT 76.6 sq ft DX 72.6 sq ft CW  96"	Cartridge 80 sq ft  96"		
Economizer  96"	Blank access  48"		Drain pan only  48"		SWSI 44" diameter  72"	Gas 1500-2000 MBh  48"		Drain pan only  48"	Blank access  48"		
Econ. with return air fan  96"	Econ w/prop exh fans, back return  72"	Econ w/prop exh fans, side return  120"	Heating with face & bypass 28.1 sq ft HT  48"		49" diameter  96"	Blank access  48"		Heating with face & bypass 28.1 sq ft HT  48"	Blank access  72"		
Mixing box  72"	Econ w/prop exh fans, bottom return  96"									DX = Direct expansion cooling CW = Chilled water cooling HT = Hot Water or steam heating	

Section Diagram — RAH077C



- (1) Blow-through sections not available on units with a SWSI supply fan.
 (2) Burglar bars and isolation dampers not available when there are no sections between the supply fan and the discharge plenum for units with bottom discharge.

Unit Considerations — RAH077C

Splitting Units

- 1 All units with DWDI supply fans may be split at the Supply Air Fan section outlet.
- 1 Units exceeding 52 feet in length may need to be split at the Supply Air Fan section outlet for shipping purposes.

Cooling Coils

- 1 Cooling Coils are available in either direct expansion or chilled water type and can be located in the Heat/Cool sections.
- 1 Chilled water cooling coils are available with or without factory installed three-way modulating control valve as well as face and bypass dampers and actuator.
- 1 Factory wired control of cooling coils is limited to one cooling coil section per unit.

Heating Media - Steam/Hot Water

- 1 Heating coils are available in either steam or hot water type and can be located in either the Heat/Cool sections or the Heat sections.
- 1 Heating coils are available with or without factory installed face and bypass dampers and actuator in the Heat/Cool sections. Factory installed control valves are not available on heating coils in the Heat/Cool sections.
- 1 Heating coils are available with or without a factory installed control valve in the Heat sections. Factory installed face and bypass dampers are not available on heating coils in the Heat sections.

Electric Heat

- 1 Electric heating coils can be located in the Blow-through Heat section, position G only on units with a DWDI supply fan

Gas Heat

- 1 A gas heating furnace can be located in the Blow-through Heat section, position G only on units with a DWDI supply fan. Factory wired control of cooling coils is limited to one heating section per unit.

Final Filters

- 1 If final filters are installed, a Discharge Plenum section is required in position K.
- 1 Final filters are not available on units with a SWSI supply fan.
- 1 Final filters are not available on units with a blow-through cooling coil in the Heat/Cool section, position I.

Blank access compartment

- 1 The blank access compartment is available on units with a discharge plenum in position K with bottom or side discharge only.
- 1 The blank access compartment is not available on units with a SWSI supply fan

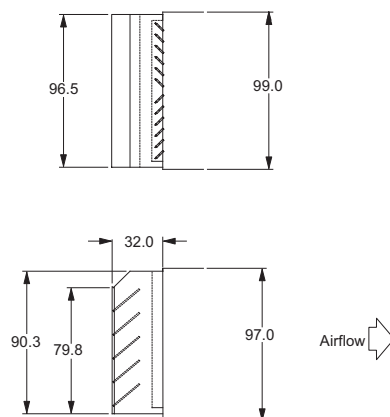
General

- 1 When any selection is located in position H (Blank access section), I (Blow-through Heat/Cool Section), or J (Final Filter Section) a heating or blank section must be placed in position G to provide proper airflow diffusion for the sections that follow the supply fan

Position A — Outdoor/Return Air Section — RAH077C — Mandatory Selection

Figure 125: 100% Outside Air Hood

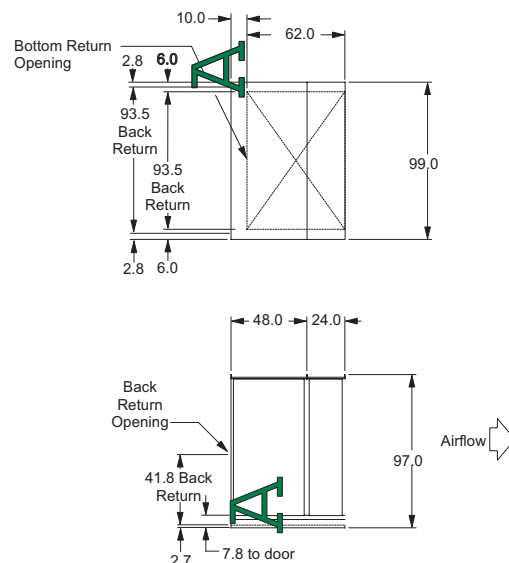
- 100% Outdoor air hood
- ☐ With dampers
 - ☐ Without dampers



Note: This option does not affect unit curb length

Return Air Plenum

- Return air plenum
- ☐ Bottom return
 - ☐ Back return



Position A — Outdoor/Return Air Section - RAH077C — Mandatory Selection (continued)

Figure 126: Return Air Plenum with 30% Outside Air Hood Economizer

Return air plenum with 30% outdoor air hood
☐ Bottom return
☐ Back return

Economizer
☐ Bottom return
☐ Back return

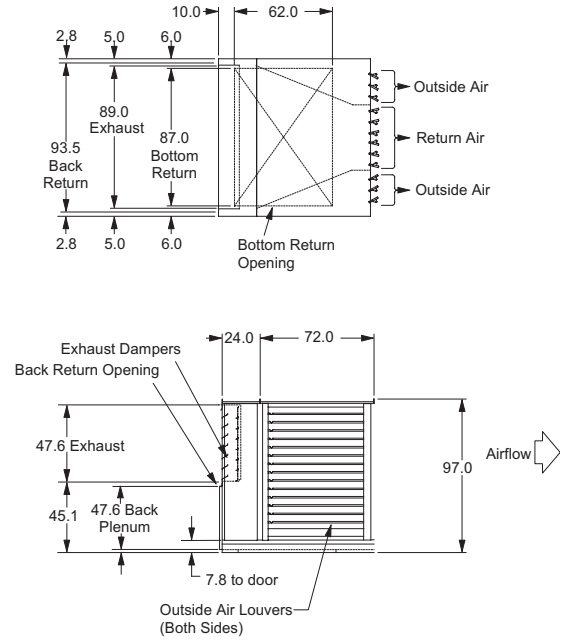
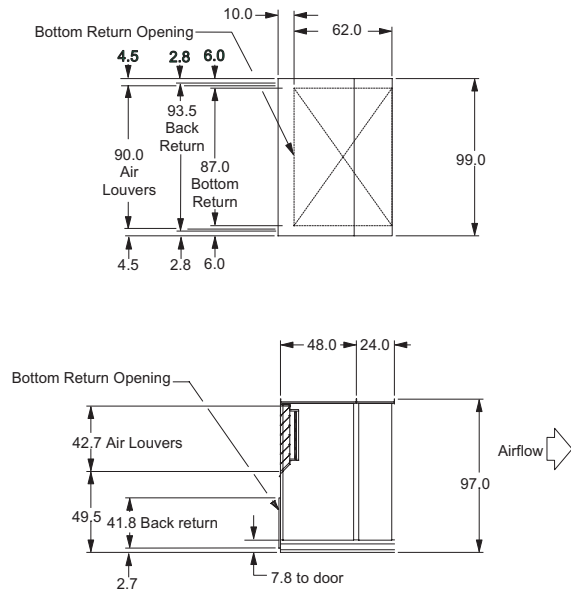


Figure 127: Economizer with Return Air Fan

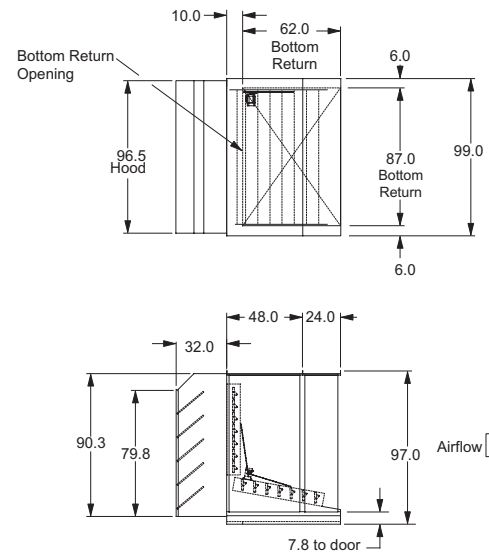
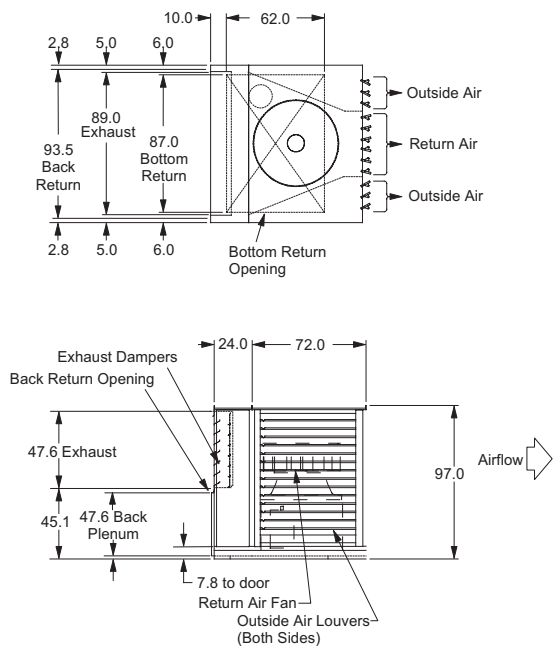
Economizer with return fan
☐ Bottom return
☐ Back return

Options

- ☐ With belt guard
- ☐ With light, receptacle and switch
- ☐ With light, receptacle, switch and belt guard

Figure 128: Outdoor/Return Air Mixing Box

Economizer with return fan
☐ Bottom return
☐ Back return



Position A — Outdoor/Return Air Section — RAH077C

Figure 129: RAH077C - Back Return Propeller Exhaust Fans (2 Shown)

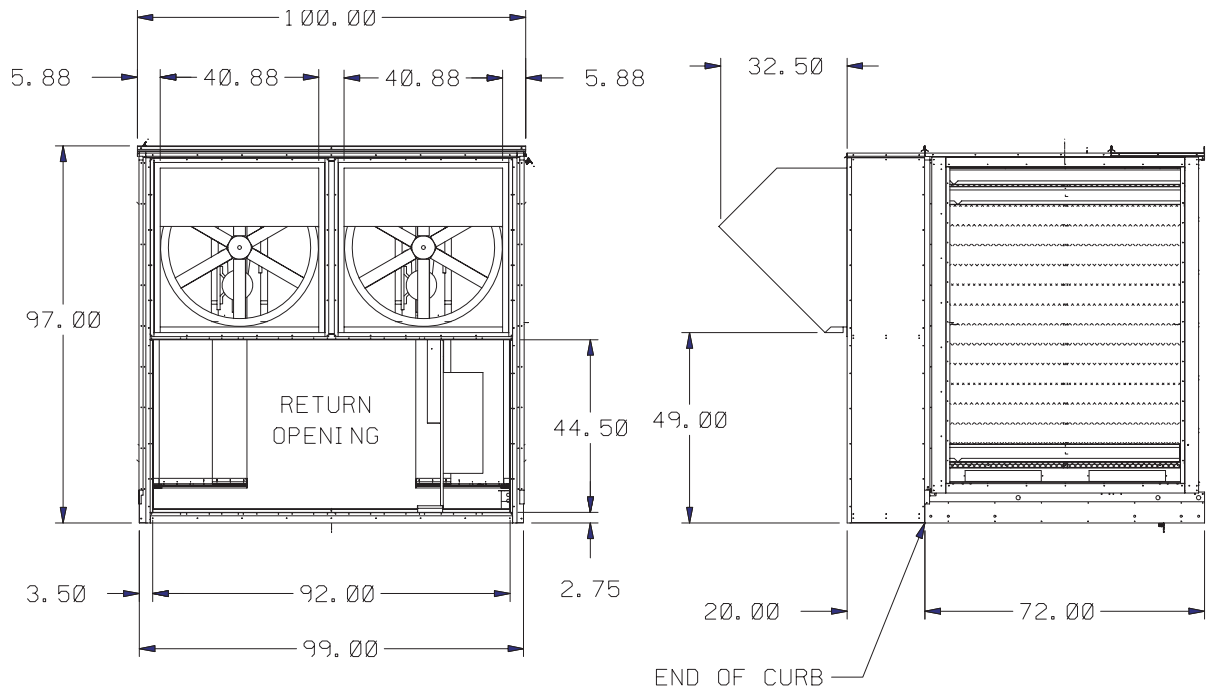
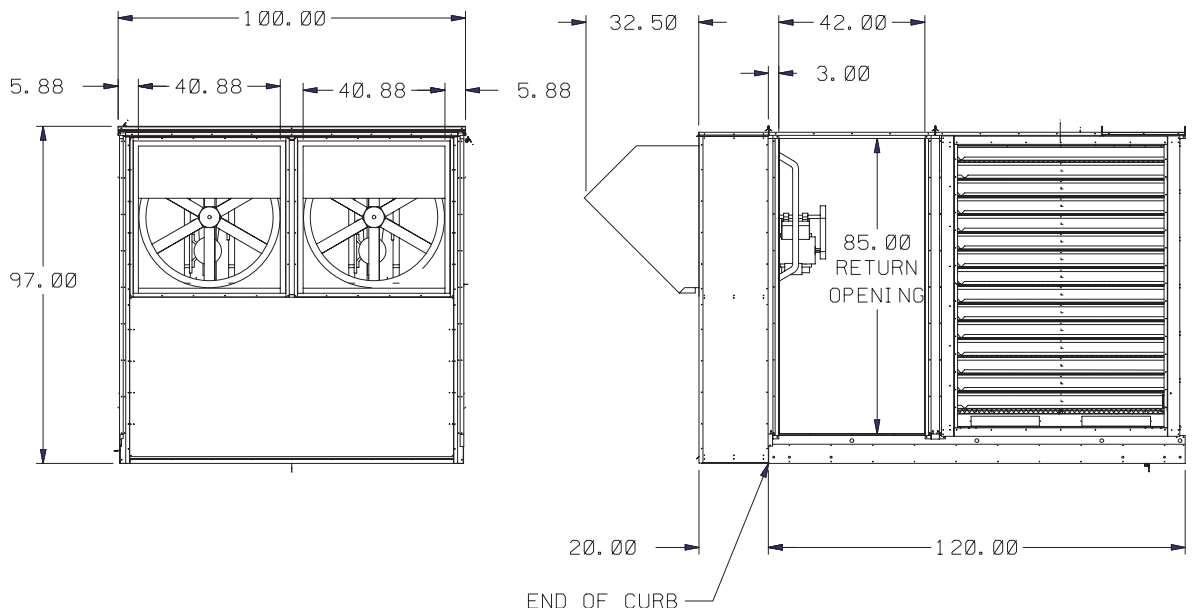


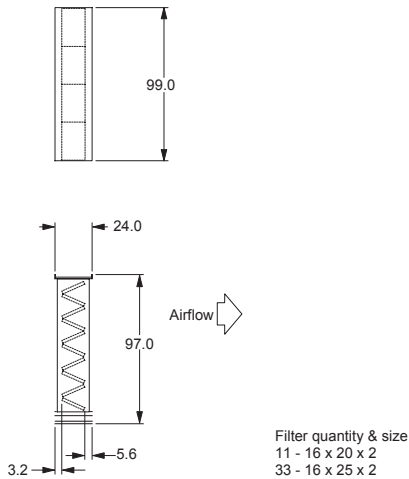
Figure 130: RAH077C - Side Return Propeller Exhaust Fans



Position B — Draw-Through Filter Section — RAH077C — *Mandatory Selection*

Figure 131: Angular Filters — 2-Foot Section

- Angular filters - 2-foot section
- ☐ Throwaway
 - ☐ 30% efficiency



Cartridge Filter with Pre-Filter — 2-Foot Section

- 56 sq. ft. cartridge with prefilter - 2 foot section
- ☐ 65% efficiency
 - ☐ 95% efficiency

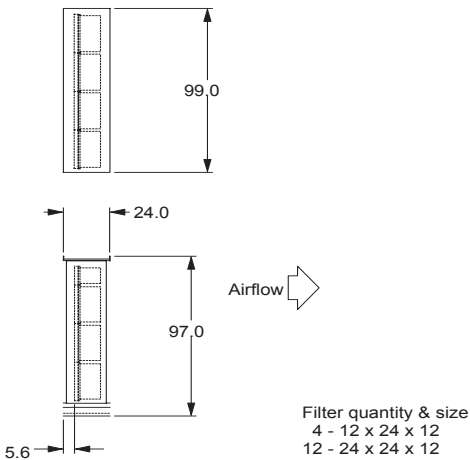
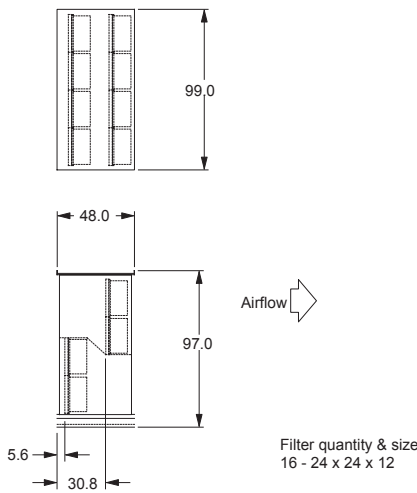


Figure 132: 64.0 sq. ft. Cartridge with Pre-Filters — 4' section

- 64 sq. ft. cartridge with prefilter - 4 foot section
- ☐ 65% efficiency - staggered
 - ☐ 95% efficiency - staggered



6' section

- 80 sq. ft. cartridge with prefilter - 6-foot section
- ☐ 65% efficiency - staggered
 - ☐ 95% efficiency - staggered

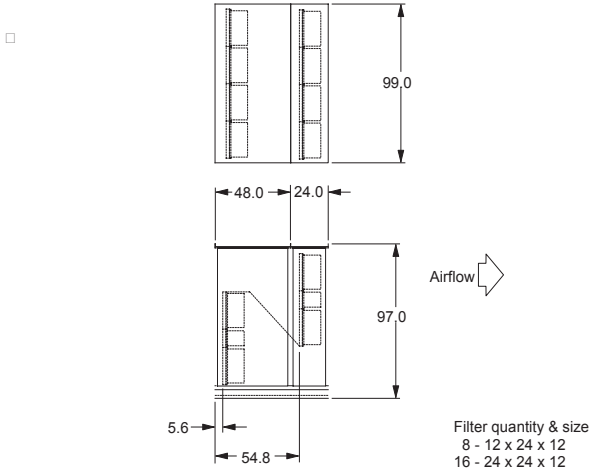
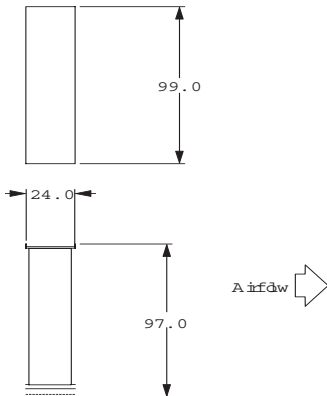


Figure 133: Blank Section — 2' Section

Blank section - 2-foot section

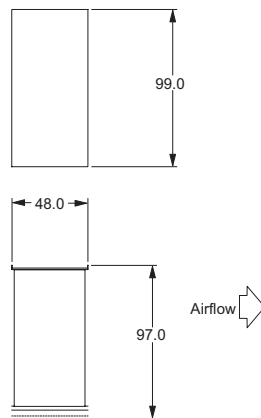


Blank Access Sections — 4 Foot Section — Positions B, C, E G and H — RAH077C

Figure 134: Section Locations

Section locations

- ☐ Position B - draw-through filter section
- ☐ Position C - draw-through blank access section
- ☐ Position E - draw-through heat section
- ☐ Position G - draw-through heat section (includes diffuser)
- ☐ Position H - draw-through blank access section (3)



Notes:

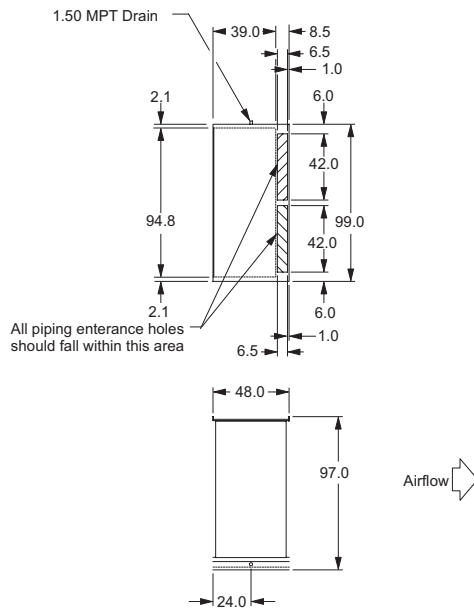
- (1) This section may be located in one or more of the locations listed above.
- (2) Blank Access section in position G and H not available on units with a SWSI supply fan.
- (3) Blank Access section in position H requires a blank or heat section in position G.

Heat/Cool Section — Drain Pipe Only — Positions D or I

Figure 135: Section Location

Section locations

- ☐ Position D - draw-through
- ☐ Position I - blow-through (2)



Notes:

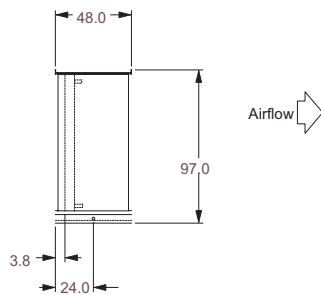
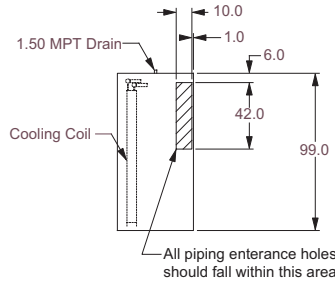
- (1) Blank Access section in position I not available on units with a SWSI supply fan.
- (2) Drain pan only section in position I requires a blank or heat section in position G.

Position D — Draw-Through Heat/Cool Section — Standard Face Area Coil — RAH077C

Figure 136: Cooling Unit Only

Cooling coil only

- ☐ Chilled water without valve and piping (51.9 sq. ft.)
- ☐ Chilled water with 3-way modulating valve and piping (51.9 sq. ft.)
- ☐ DX evaporator (54.7 sq. ft.)



Cooling Coil with Face & Bypass Damper

Cooling coil with face and bypass damper

- ☐ Chilled water without valve and piping (36.3 sq. ft.)
- ☐ Chilled water with 3-way modulating valve and piping (36.3 sq. ft.)

Damper Actuator

- ☐ With damper actuator
- ☐ Without damper actuator

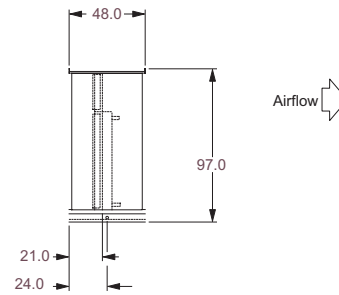
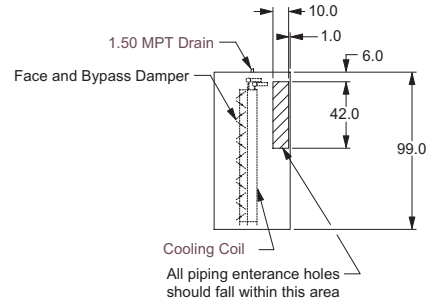


Figure 137: Combination Heating & Cooling

Combination heating and cooling

Heating coil (42.2 sq.ft.)

- ☐ Steam coil without valve and piping
- ☐ Hot water coil without valve and piping

Cooling coil

- ☐ Chilled water without valve and piping (51.9 sq. ft.)
- ☐ Chilled water with 3-way modulating valve and piping (51.9 sq. ft.)
- ☐ DX evaporator (54.7 sq. ft.)

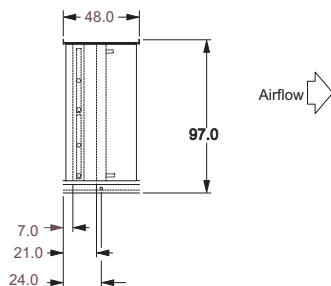
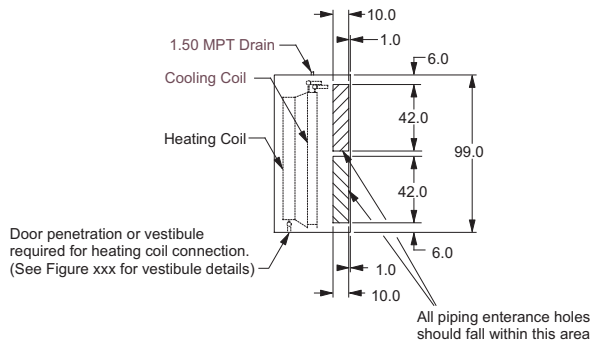


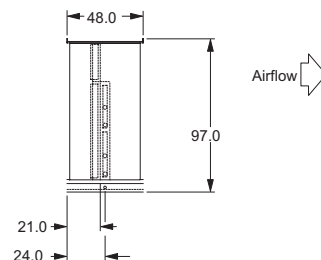
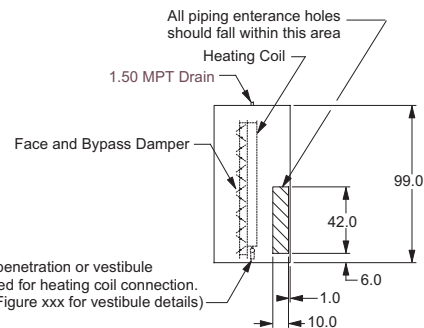
Figure 138: Heating Coil with Face and Bypass Damper (28.1 sq. ft.)

Heating coil with face and bypass damper (28.1 sq.ft.)

- ☐ Steam coil without valve and piping
- ☐ Hot water coil without valve and piping

Damper Actuator

- ☐ With damper actuator
- ☐ Without damper actuator



Position D — Draw-Through Heat/Cool Section — Large Face Area Coil — RAH077C

Figure 139: Cooling Unit Only

Cooling coil only - staggered

- ☐ Chilled water without valve and piping (72.6 sq. ft.)
- ☐ Chilled water with 3-way modulating valve and piping (72.6 sq. ft.)
- ☐ DX evaporator (76.6 sq. ft.)

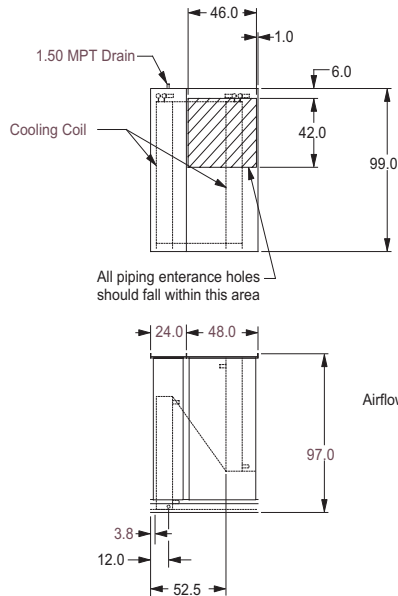


Figure 140: Combination Heating & Cooling

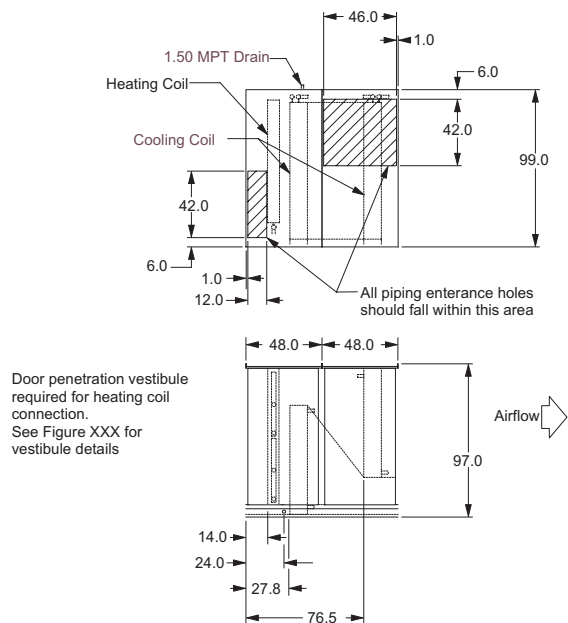
Combination heating and cooling

Heating coil (42.2 sq.ft.)

- ☐ Steam coil without valve and piping
- ☐ Hot water coil without valve and piping

Cooling coil

- ☐ Chilled water without valve and piping (72.6 sq. ft.)
- ☐ Chilled water with 3-way modulating valve and piping (72.6 sq. ft.)
- ☐ DX evaporator (76.6 sq. ft.)



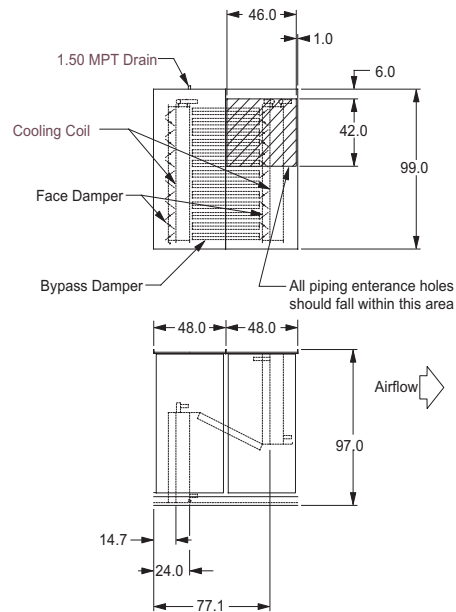
Cooling Coil with Face & Bypass Damper - Staggered

Cooling coil with face and bypass damper - staggered

- ☐ Chilled water without valve and piping (62.3 sq. ft.)
- ☐ Chilled water with 3-way modulating valve and piping (62.3 sq. ft.)

Damper Actuator

- ☐ With damper actuator
- ☐ Without damper actuator

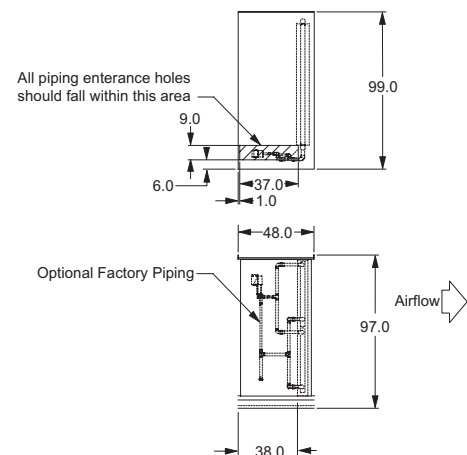


Position E — Draw-Through Heat Only Section

Figure 141: Heat Only Section

Heating only section

- ☐ Hot water without valve and piping (42.2 sq. ft.)
- ☐ Hot water with 3-way modulating valve and piping (42.2 sq. ft.)
- ☐ Steam coil without valve and piping (42.2 sq. ft.)
- ☐ Steam coil with 3-way modulating valve and piping (42.2 sq. ft.)

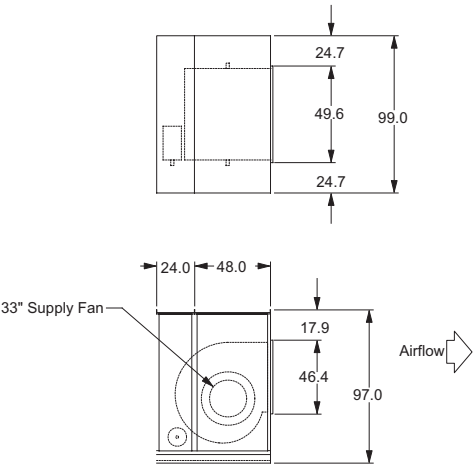


Note: Typical hot water piping shown, see IM487 for typical steam piping.

Position F — Supply Air Fan Section — Mandatory Selection — RAH077C

Figure 142: Supply Air Fan — DWDI

- Supply air fan - DWDI
- ☐ 33"
- Fan type
- ☐ Forward curved
 - ☐ Airfoil
 - ☐ Airfoil with variable inlet vanes
- Options
- ☐ With belt guard
 - ☐ With light, receptacle and switch
 - ☐ With light, receptacle, switch and belt guard



- Supply air fan - DWDI
- ☐ 36"
 - ☐ 40"
- Fan type
- ☐ Forward curved
 - ☐ Airfoil
 - ☐ Airfoil with variable inlet vanes
- Options
- ☐ With belt guard
 - ☐ With light, receptacle and switch
 - ☐ With light, receptacle, switch and belt guard

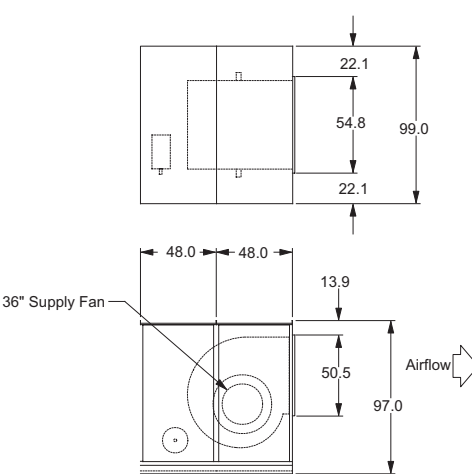
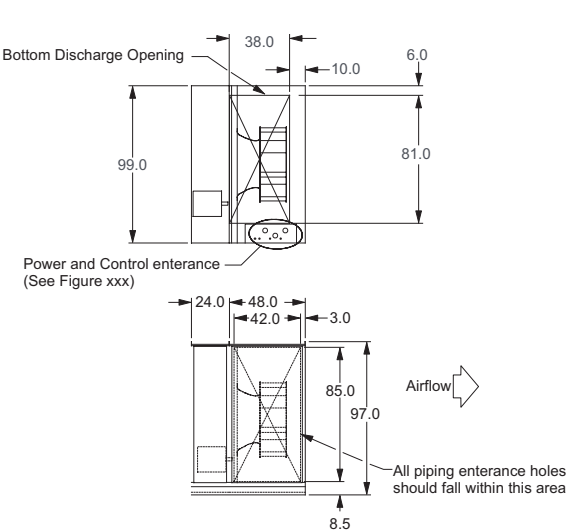
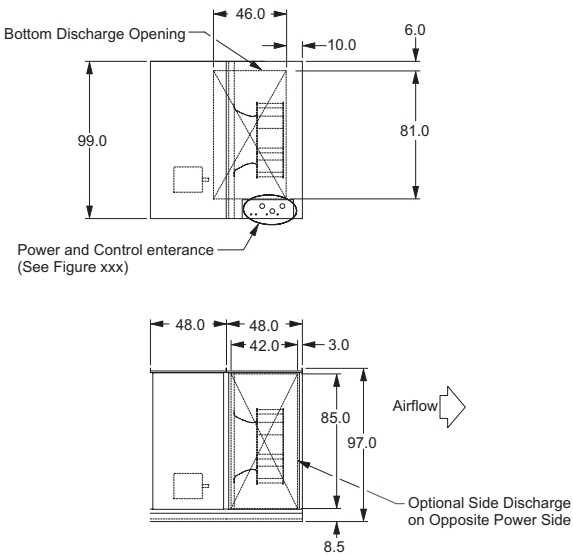


Figure 143: Supply Air Fan — SWSI

- Supply air fan - SWSI
- ☐ 44"
- Fan type
- ☐ Airfoil without variable inlet vanes
 - ☐ Airfoil with variable inlet vanes
- Discharge opening
- ☐ Bottom discharge
 - ☐ Side discharge
- Options
- ☐ With belt guard
 - ☐ With light, receptacle and switch
 - ☐ With light, receptacle, switch and belt guard



- Supply air fan - SWSI
- ☐ 49"
- Fan type
- ☐ Airfoil without variable inlet vanes
 - ☐ Airfoil with variable inlet vanes
- Discharge opening
- ☐ Bottom discharge
 - ☐ Side discharge
- Options
- ☐ With belt guard
 - ☐ With light, receptacle and switch
 - ☐ With light, receptacle, switch and belt guard

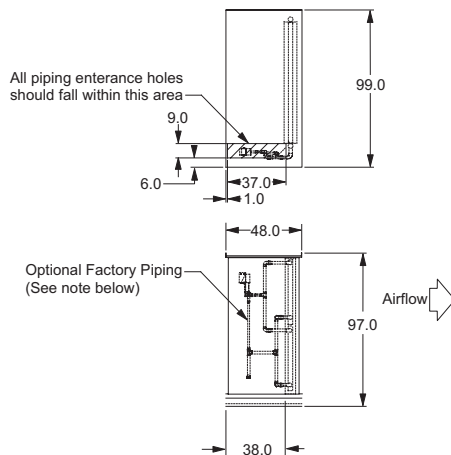


Position G — Blow-Through Heat Only Section — RAH077C

Figure 144: Heat Only Section

Heating only section

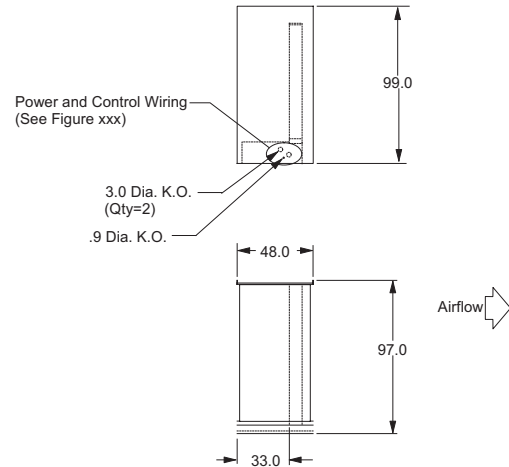
- ☐ Hot water without valve and piping (42.2 sq. ft.)
 - ☐ Hot water with 3-way modulating valve and piping (42.2 sq. ft.)
 - ☐ Steam coil without valve and piping (42.2 sq. ft.)
 - ☐ Steam coil with 3-way modulating valve and piping (42.2 sq. ft.)
- See note below



Note: Typical hot water piping shown, see IM487 for typical steam piping.

Heating only section

- ☐ Electric heat

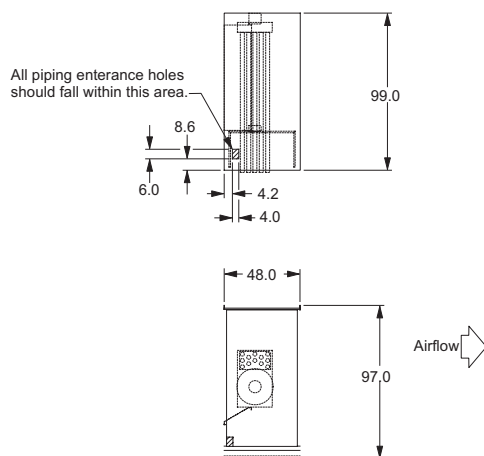


Note: Heat section in position G not available on units with a SWSI supply fan.

Figure 145: Heat Only Section

Heating only section

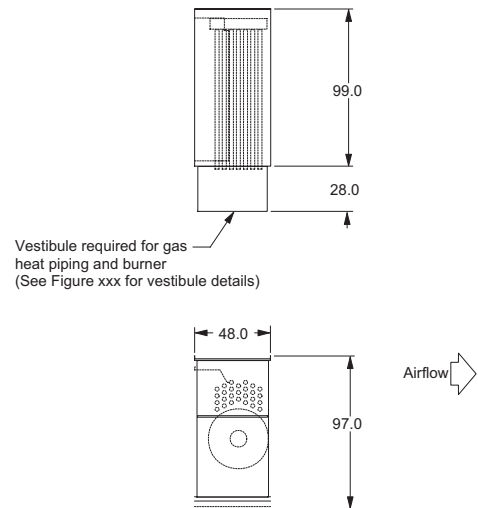
- ☐ Gas heat with controls (500-1400 MBh output)



Note: Heat section in position G not available on units with a SWSI supply fan.

Heating only section

- ☐ Electric heat



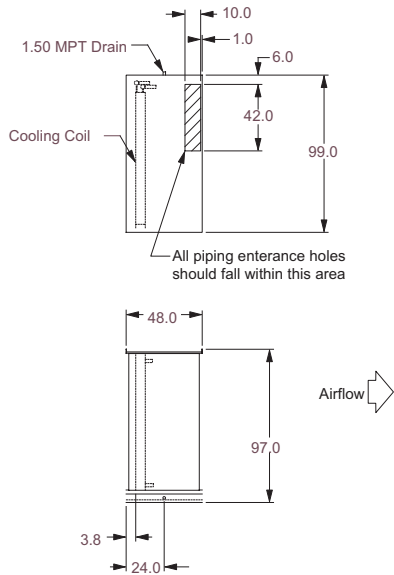
Note: Heat section in position G not available on units with a SWSI supply fan.

Position I — Blow-Through Heat/Cool Section — RAH077C — Standard Face Area Coils

Figure 146: Cooling Coil Only

Cooling coil only

- ☐ Chilled water without valve and piping (51.9 sq. ft.)
- ☐ Chilled water with 3-way modulating valve and piping (51.9 sq. ft.)
- ☐ DX evaporator (54.7 sq. ft.)



Note: Heat/Cool section in position I not available on units with a SWSI supply fan.
Heat/Cool section in position I requires a blank or heating section in position G.

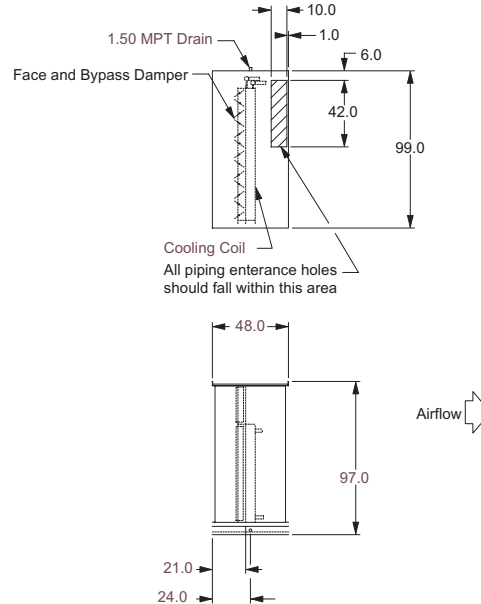
Cooling Coil with Face & Bypass Damper

Cooling coil with face and bypass damper

- ☐ Chilled water without valve and piping (36.3 sq. ft.)
- ☐ Chilled water with 3-way modulating valve and piping (36.3 sq. ft.)

Damper Actuator

- ☐ With damper actuator
- ☐ Without damper actuator



Note: Heat/Cool section in position I not available on units with a SWSI supply fan.
Heat/Cool section in position I requires a blank or heating section in position G.

Figure 147: Combination Heating and Cooling

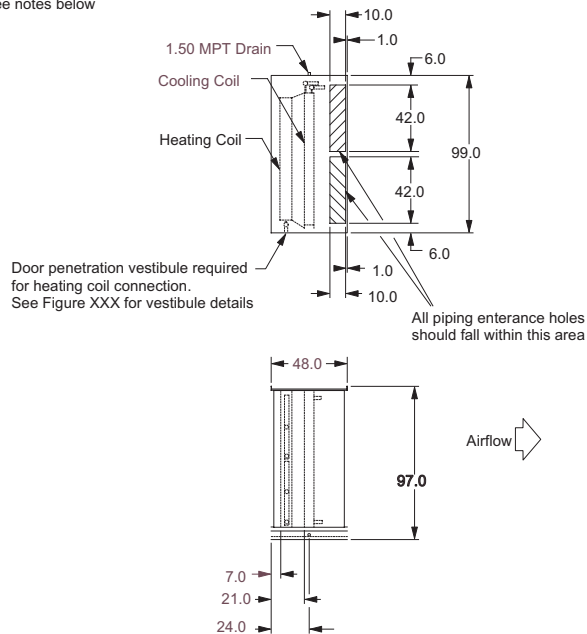
Heating coil (42.2 sq.ft.)

- ☐ Steam coil without valve and piping
- ☐ Hot water coil without valve and piping

Cooling coil

- ☐ Chilled water without valve and piping (51.9 sq. ft.)
- ☐ Chilled water with 3-way modulating valve and piping (51.9 sq. ft.)
- ☐ DX evaporator (54.7 sq. ft.)

See notes below



Note: Heat/Cool section in position I not available on units with a SWSI supply fan.
Heat/Cool section in position I requires a blank or heating section in position G.

Heating Coil with Face & Bypass Damper (28.1 sq. ft.)

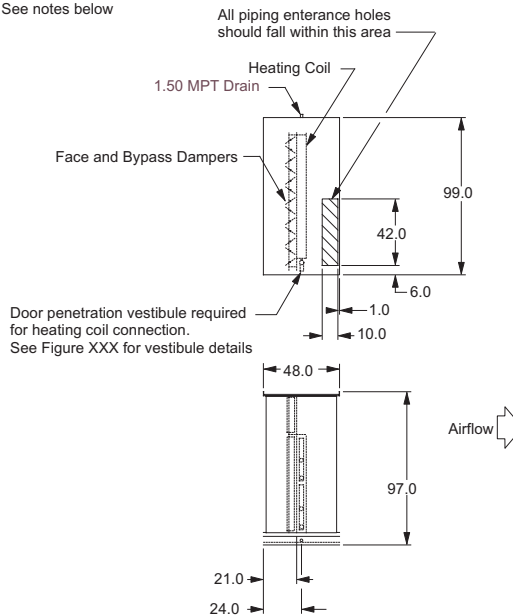
Heating coil with face and bypass damper (28.1 sq.ft.)

- ☐ Steam coil without valve and piping
- ☐ Hot water coil without valve and piping

Damper Actuator

- ☐ With damper actuator
- ☐ Without damper actuator

See notes below



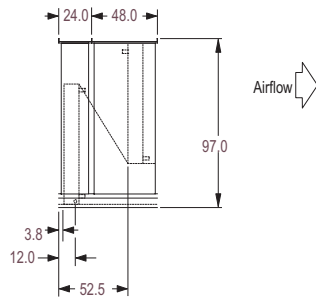
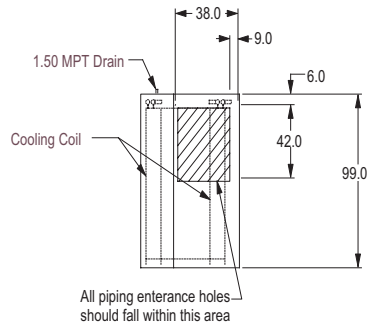
Note: Heat/Cool section in position I not available on units with a SWSI supply fan.
Heat/Cool section in position I requires a blank or heating section in position G.

Position I — Blow-Through Heat/Cool Section — RAH077C — Large Face Area Coils

Figure 148: Cooling Coil Only - Staggered

Cooling coil only - staggered

- ☐ Chilled water without valve and piping (72.6 sq. ft.)
- ☐ Chilled water with 3-way modulating valve and piping (72.6 sq. ft.)
- ☐ DX evaporator (76.6 sq. ft.)



Note: Heat/Cool section in position I not available on units with a SWSI supply fan.
Heat/Cool section in position I requires a blank or heating section in position G.

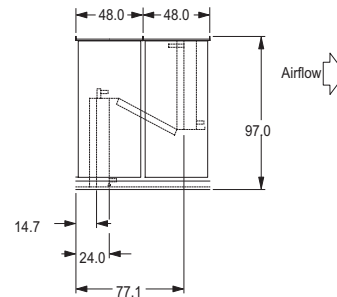
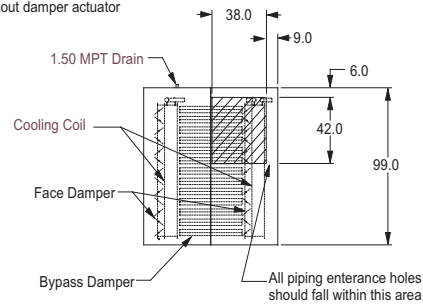
Cooling Coil with Face & Bypass Damper - Staggered

Cooling coil with face and bypass damper - staggered

- ☐ Chilled water without valve and piping (62.3 sq. ft.)
- ☐ Chilled water with 3-way modulating valve and piping (62.3 sq. ft.)

Damper Actuator

- ☐ With damper actuator
- ☐ Without damper actuator



Note: Heat/Cool section in position I not available on units with a SWSI supply fan.
Heat/Cool section in position I requires a blank or heating section in position G.

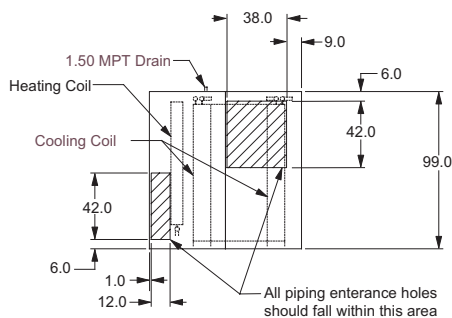
Figure 149: Combination Heating and Cooling

Heating coil (42.2 sq.ft.)

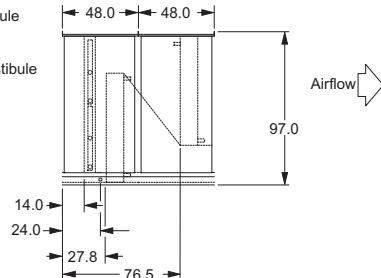
- ☐ Steam coil without valve and piping
- ☐ Hot water coil without valve and piping

Cooling coil

- ☐ Chilled water without valve and piping (72.6 sq. ft.)
- ☐ Chilled water with 3-way modulating valve and piping (72.6 sq. ft.)
- ☐ DX evaporator (76.6 sq. ft.)



Door penetration vestibule
required for heating coil
connection.
See Figure XXX for vestibule
details



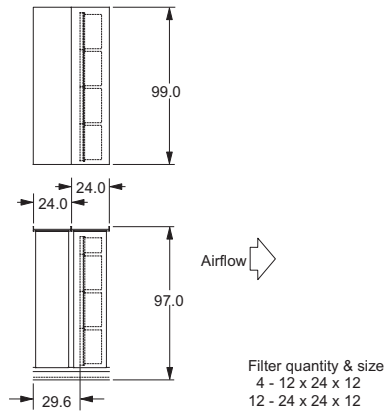
Note: Heat/Cool section in position I not available on units with a SWSI supply fan.
Heat/Cool section in position I requires a blank or heating section in position G.

Position J — Final Filter Section — RAH077C

Figure 150: 56 sq. ft. Cartridge — 4 Foot Section

56 sq. ft. cartridge - 4 foot section
 □ 95% efficiency

See notes below



64 sq. ft. Cartridge — 6 Foot Section

64 sq. ft. cartridge - 6 foot section
 □ 95% efficiency - staggered

See notes below

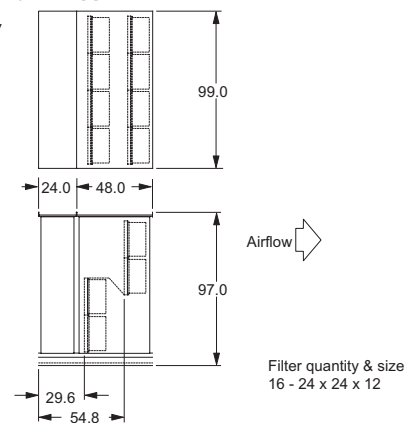
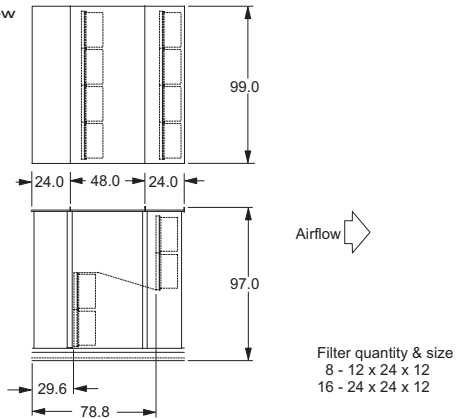


Figure 151: 80 sq. ft. Cartridge — 8 Foot Section

80 sq. ft. cartridge - 8 foot section
 □ 95% efficiency - staggered

See notes below



Blank Access Section

Blank access section
 □ Blank - 4 foot section

See notes below

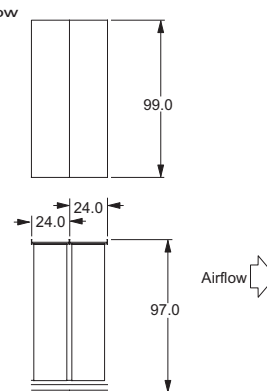
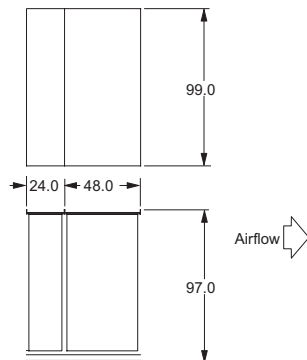


Figure 152: Blank Access Section

Blank access section
 □ Blank - 6-foot section

See notes below



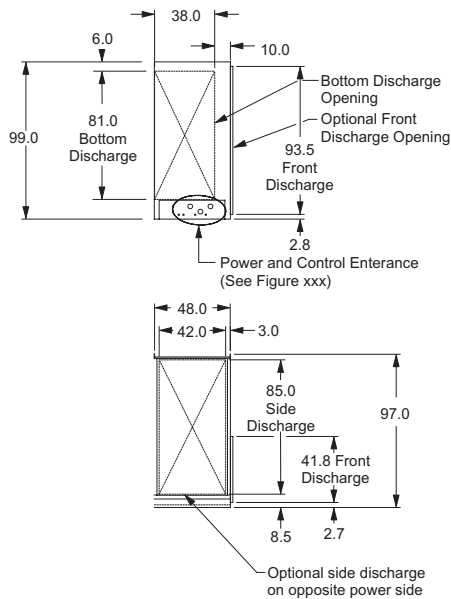
Notes:

- (1) Final Filter section not available on units with a SWSI supply fan.
- (2) Final filters are not available on units with a blow-through cooling coil in the Heat/Cool section, position I.
- (3) Final filter option requires a discharge plenum in position K.
- (4) Final filter option requires a blank or heating section in position G.

Position K — Discharge Plenum — RAH077C

Figure 153: RAH077CS - 4 ft Standard Face Area Coil

- Discharge plenum (4-foot) for standard face area coil units
- ☐ Bottom discharge (see note)
 - ☐ Front discharge
 - ☐ Side discharge



Note: Discharge plenum not available on units with a SWSI supply fan.

Figure 154: RAH077CL and 077CY

- Discharge plenum (4-foot) for Blow-through units with large face area coils or without cooling coils in Heat/Cool section, Plenum I, and/or with Final Filter section, Position J.
- ☐ Bottom discharge
 - ☐ Front discharge
 - ☐ Side discharge

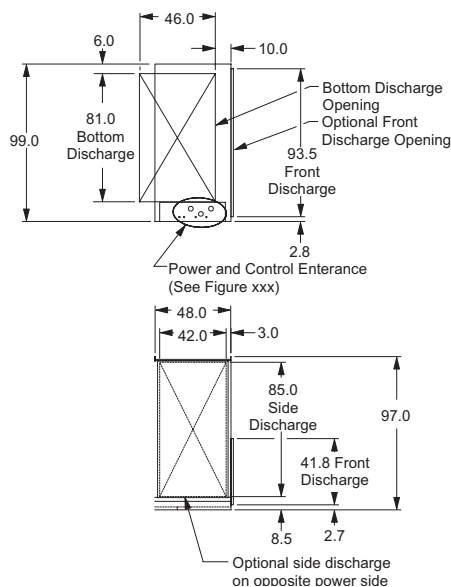
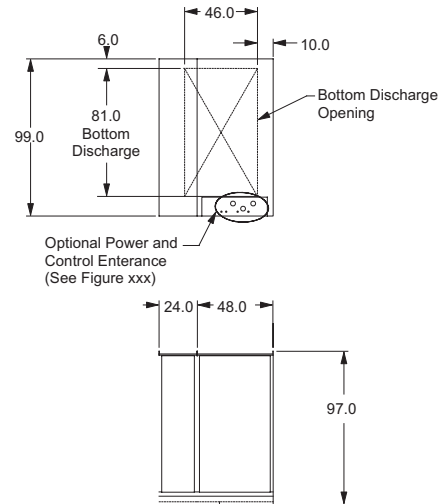


Figure 155: RAH077CL and 077CY Discharge Plenum 6 ft for Draw -Through

- Discharge plenum (6-foot) for Draw-through units with large face area coils or without cooling coils in Heat/Cool section, Plenum D, and without Final Filter section, Position J.
- ☐ Bottom discharge

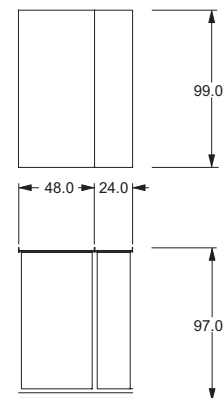


Note: Burglar bars and isolation dampers not available when there are no sections between the supply fan and discharge plenum for units with bottom discharge.

Position L — Blank Compartment Section

Figure 156: Blank Compartment

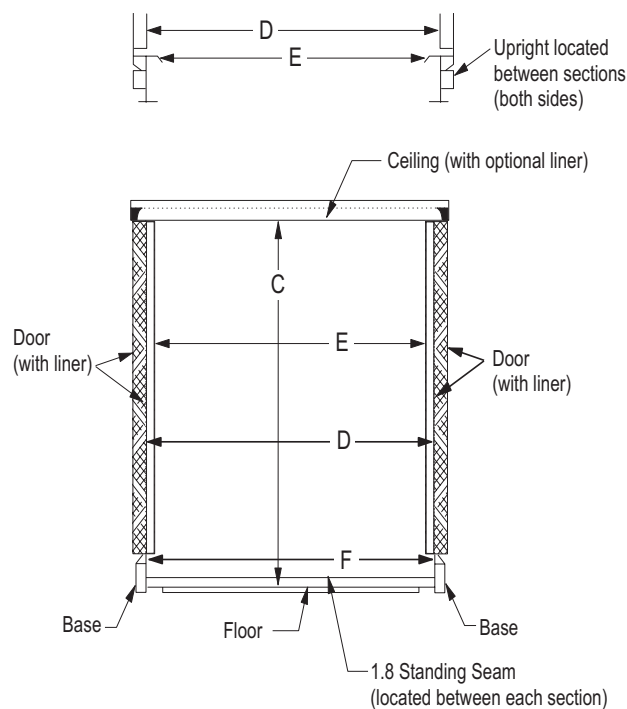
- Blank compartment
- ☐ Out of airstream - 6-foot



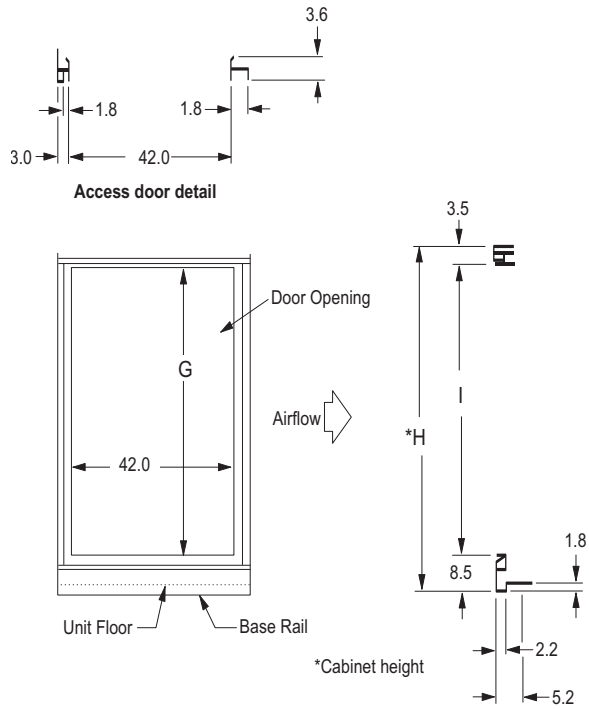
Note: Blank Compartment section requires a discharge plenum with bottom or side discharge in position K.

Blank Access & Drain Pan Only Section Detail Drawings

Figure 157: Cross Section Detail — RAH077C



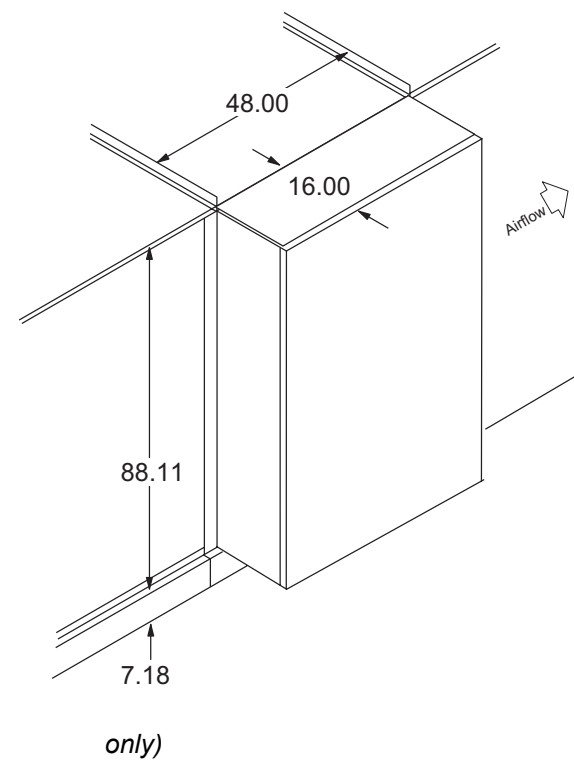
Access Door Detail — RAH077C



Vestibule Detail Drawings — RAH077C

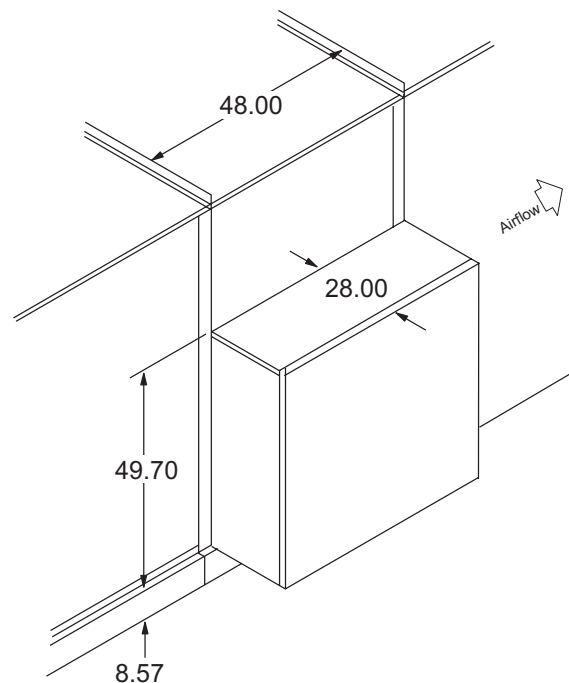
Figure 158: Heat Coil Piping Vestibule

Heat coil piping vestibule



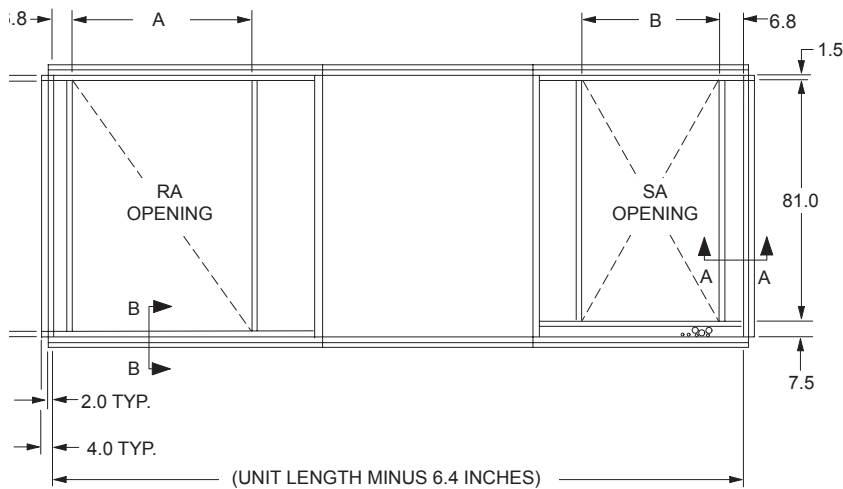
Gas Heat Coil Piping Vestibule (1599 & 2000 MBh)

Gas heat piping vestibule (1500 & 2000 MBh only)



Roof Curbs — RAH077C

Figure 159: Roof Curb without Blank Compartment



Dimension (in.)	A	B
RAH077C	62.0	see tables below

Discharge Opening Dimension "B" - DWDI Supply Fan

Model	Cooling Coil Type*	Cooling Coil Size (sq. ft.)	Supply Air Opg. "B" (in.)
077CS	Chilled Water (CW)	36.3	38
		51.9	38
	Direct (DX) Expansion	54.7	38
077CL	Chilled Water (CW)	62.3	46
		72.6	46
	Direct (DX) Expansion	72.6	46
077CY	None	—	46

*Coil located in draw-through or blow-through position

Discharge Opening Dimension "B" - SWSI Plenum Supply Fan

Model	SWSI Wheel Dia (in.)	Supply Air Opg. "B" (in.)
077C	44	38
	49	46

Figure 160: Roof Curb with Blank Compartment

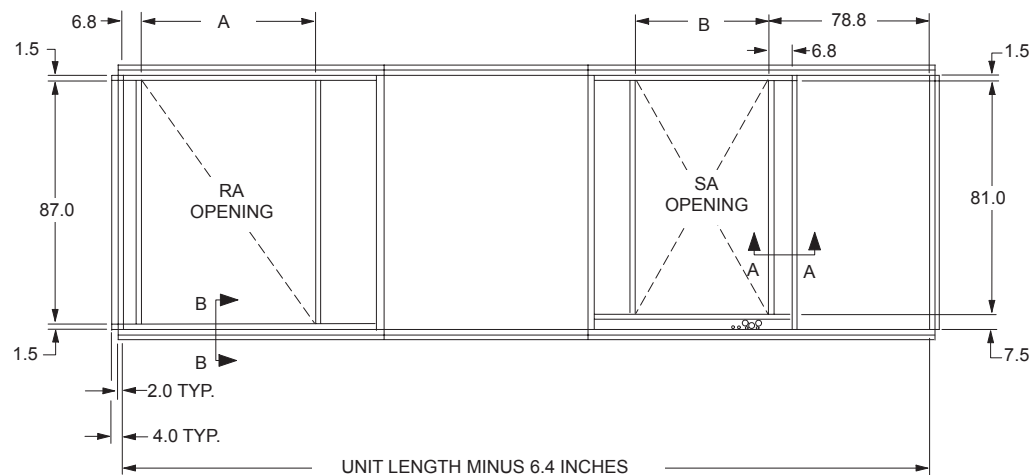
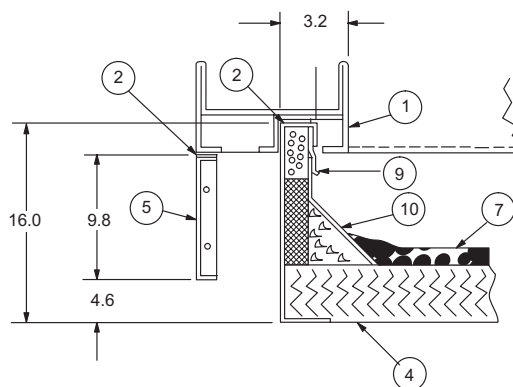


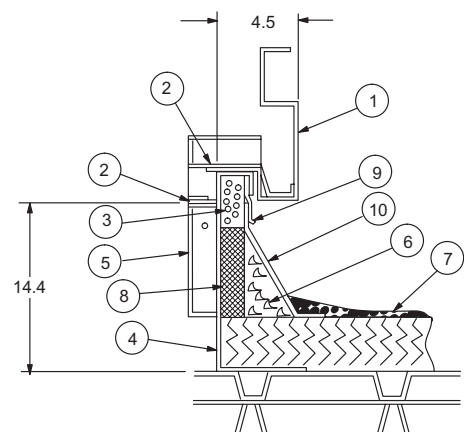
Figure 161: Curb Cross Section A-A



Key:

- 1 Unit Base
- 2 Curb Gasketing
- 3 2x4 Nailer Strip
- 4 Galvanized Curb
- 5 Duct Support
- 6 Cant Strip (Not Furnished)
- 7 Roofing Material (Not Furnished)
- 8 Counterflashing (Not Furnished)
- 9 Flashing (Not Furnished)

Curb Cross Section B-B



Electrical Knockouts—RAH 047C and 077C

Figure 162: Discharge Plenum Power and Control Wiring Entrance Detail

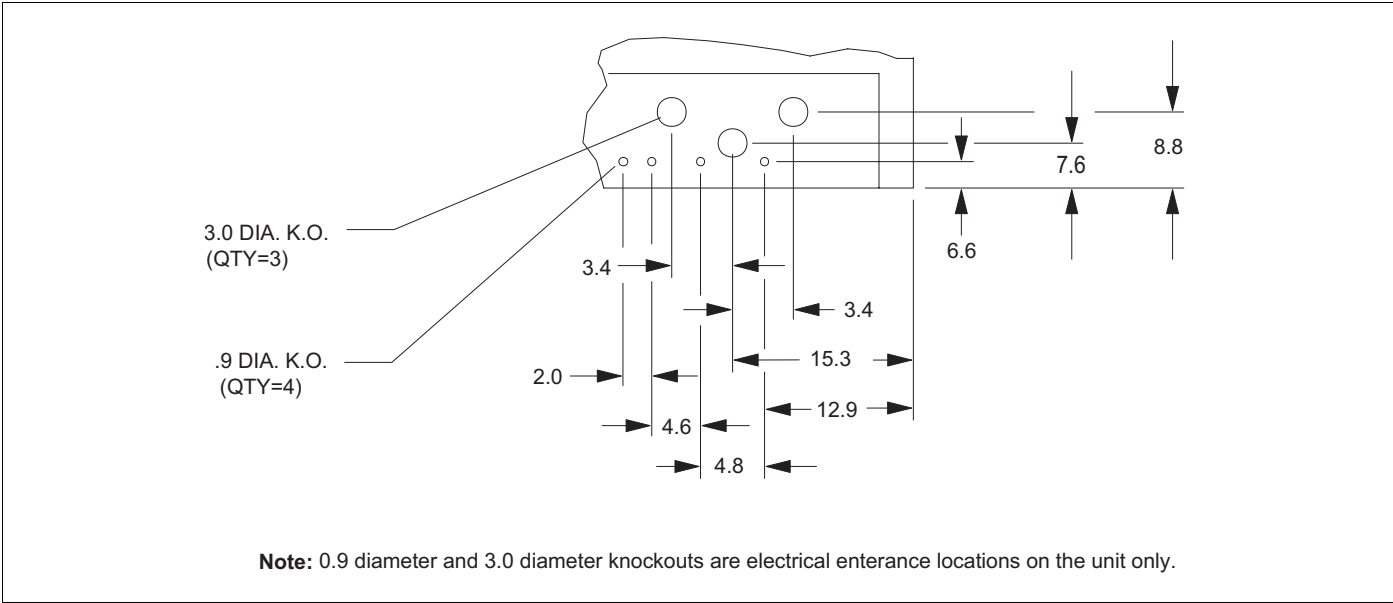


Figure 163: Electric Heat Power and Control Entrance Detail

