

INSTALLATION INSTRUCTIONS

Roof Curb and Duct Connector Accessories

Packaged Ventilation/Dedicated Outside Air System (DOAS)

models DLV and EWM

⚠ CAUTION

As with any mechanical equipment, personal injury can result from contact with sharp sheet metal edges. Be careful when you handle this equipment.

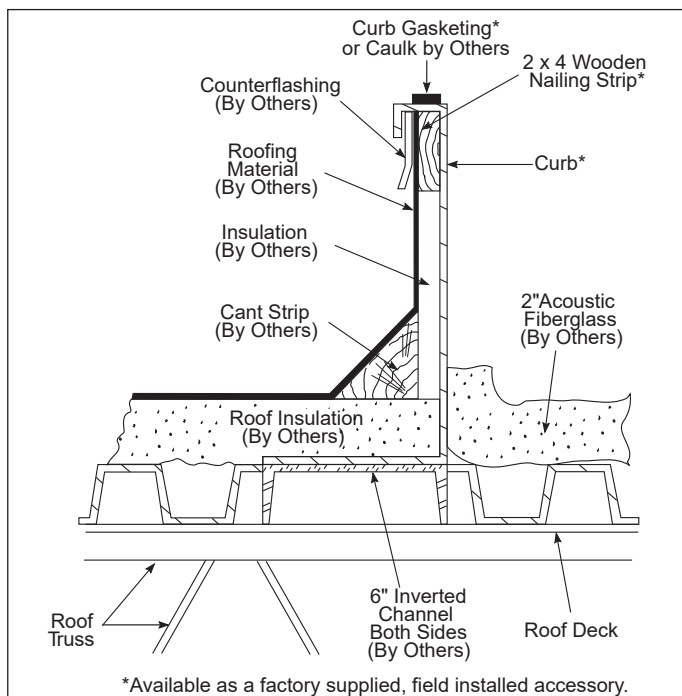
IMPORTANT

1. The use of this manual is specifically intended for a qualified installation and service agency. All installation and service of these kits must be performed by a qualified installation and service agency.
2. These instructions must also be used in conjunction with the Installation and Service Manual originally shipped with the unit, in addition to any other accompanying component supplier literature.

Application

A roof curb installation is designed to provide a watertight method for mounting the DOAS/ventilation unit and if applicable, the energy recovery module (either herein after referred to as the "unit") on the roof of a building. The roof curb also raises the height of the unit to prevent snow build-up below the fresh air inlet opening.

Figure 1.1 - Typical Curb Details



Location Recommendations

1. When locating the unit, consider general space and cooling/heating requirements and availability of gas and electrical supply.
2. The roof structure must be adequately designed to support the live weight load of the unit and any other required support structure. The roof curb should be supported at points no greater than five feet apart.
3. Select a location that allows the curb to be installed in a level horizontal position.
4. All mechanical equipment generates some sound and vibration that may require attenuation. Locating the equipment away from the critical area is desirable within ducting limitations. Frequently, units can be located above utility areas, corridors, restrooms, and other non-critical areas. Generally, a unit should be located within 15 feet of a primary support beam. Smaller deflections mean lesser vibration and noise transmission. For critical applications, please consult with an acoustical attenuation expert.
5. Do not locate units where the flue products (if equipped with a gas fired heating option) can be drawn into the adjacent building openings such as windows, fresh air intakes, etc.
6. Be sure to maintain the minimum clearances to combustible materials and recommended service clearances as discussed in the Installation and Service Manual that shipped with the unit.
7. Where possible, locate the unit so the inlet is not facing into the prevailing wind to prevent water entrainment.

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PLEASE BE SURE TO LEAVE IT WITH THE OWNER
WHEN YOU LEAVE THE JOB.

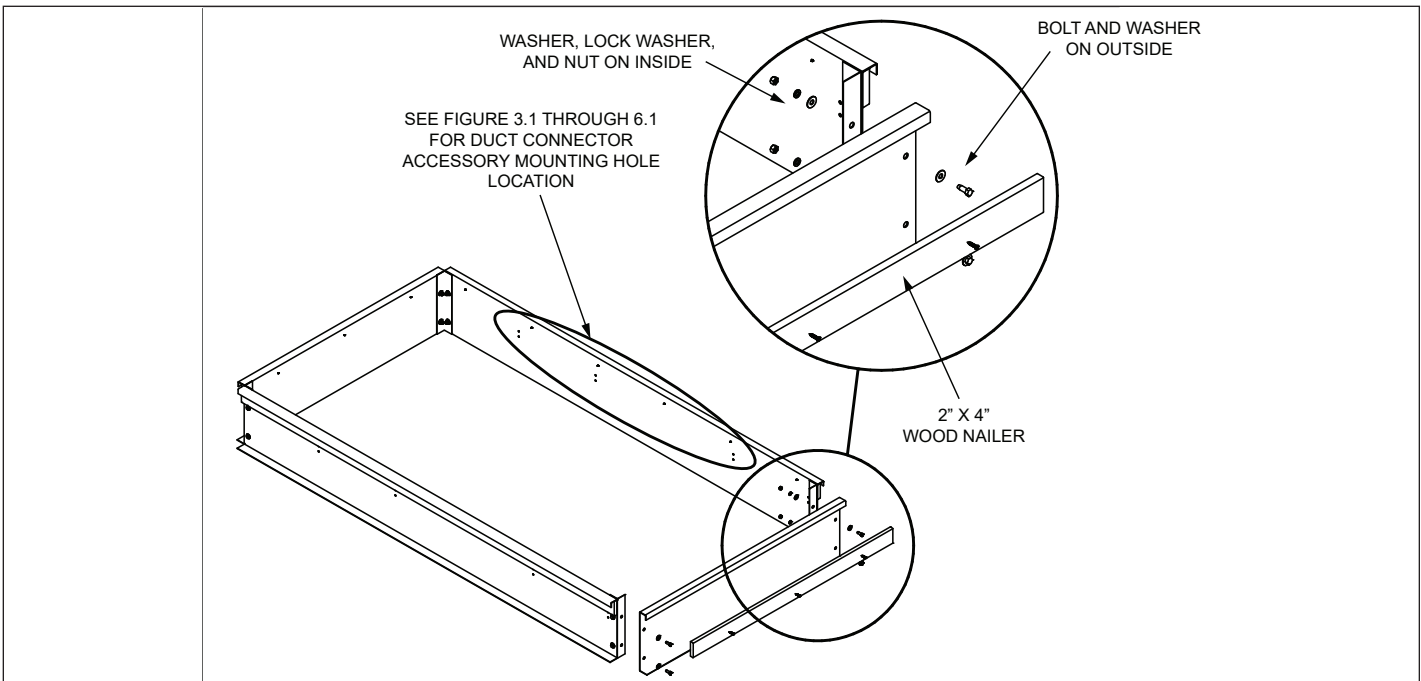
ROOF CURB ASSEMBLY / INSTALLATION

Assembly & Installation Instructions

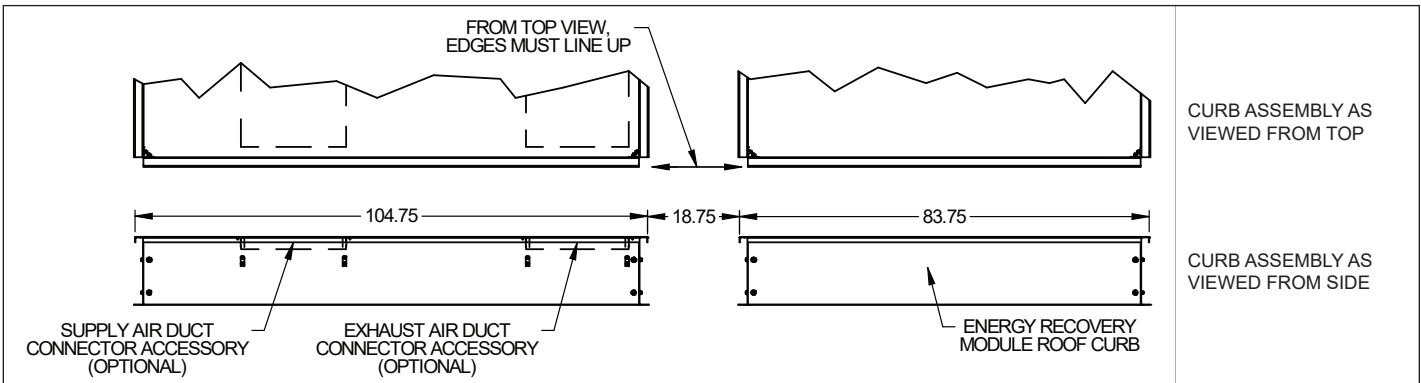
The following instructions describe the process of installing the roof curb for the unit(s). If the unit includes a C-Cabinet Energy Recovery Module, the installation steps are the same for both the main unit and the energy recovery module. Refer to the Figures on pages 1-6 for additional information.

1. Roof curbs are fabricated from 12 gauge galvanized steel and supplied knocked down for field assembly. Included are two to six side pieces (depending on unit size/ configuration as shown in the figures on pages 3-5), two end pieces, four joiner angles, splice plates if more than two side pieces, 2" x 4" wood nailing strips for around the entire curb perimeter, nuts, bolts, washers, and curb gasketing.
2. Inspect the curb components for damage and check dimensions to be sure the correct curb is being installed.
3. If the optional supply and/or return air duct connectors are being installed, refer to the dimensions on page 3 (B-cabinet), page 4 (C-cabinet), or page 5 (D-cabinet) for correct curb orientation.
4. Outside dimensions must be held when installing the curb. The top surface must be level and straight to insure a weather-tight installation once the unit is installed. All corners must be square.
5. If curbs for both unit and energy recovery module are being installed (C-cabinet only), it is critical that the spacing between curbs is correct as shown in Figure 2.2.
6. Final electric and gas connections must be made after the unit is installed to allow for tolerance in setting of the unit on curb.
7. Maintain 12" minimum height from top of roof deck to top of curb.
8. Caulk all joints of installed curb.
9. If supply and/or return air duct connectors were included, refer to page 6 for instructions.
10. Prior to unit installation, install the gasketing that was included or caulk the top of the curb and connector(s).

Figure 2.1 - Roof Curb Assembly



**Figure 2.2
Roof Curb Placement When Installing Curbs for Both Unit and Energy Recovery Module (C-Cabinet Only)**



ROOF CURB DIMENSIONS - B-CABINET SIZE UNITS

Figure 3.1 - Roof Curb Dimensions for B-Cabinet Size Units WITHOUT Energy Recovery (inches)

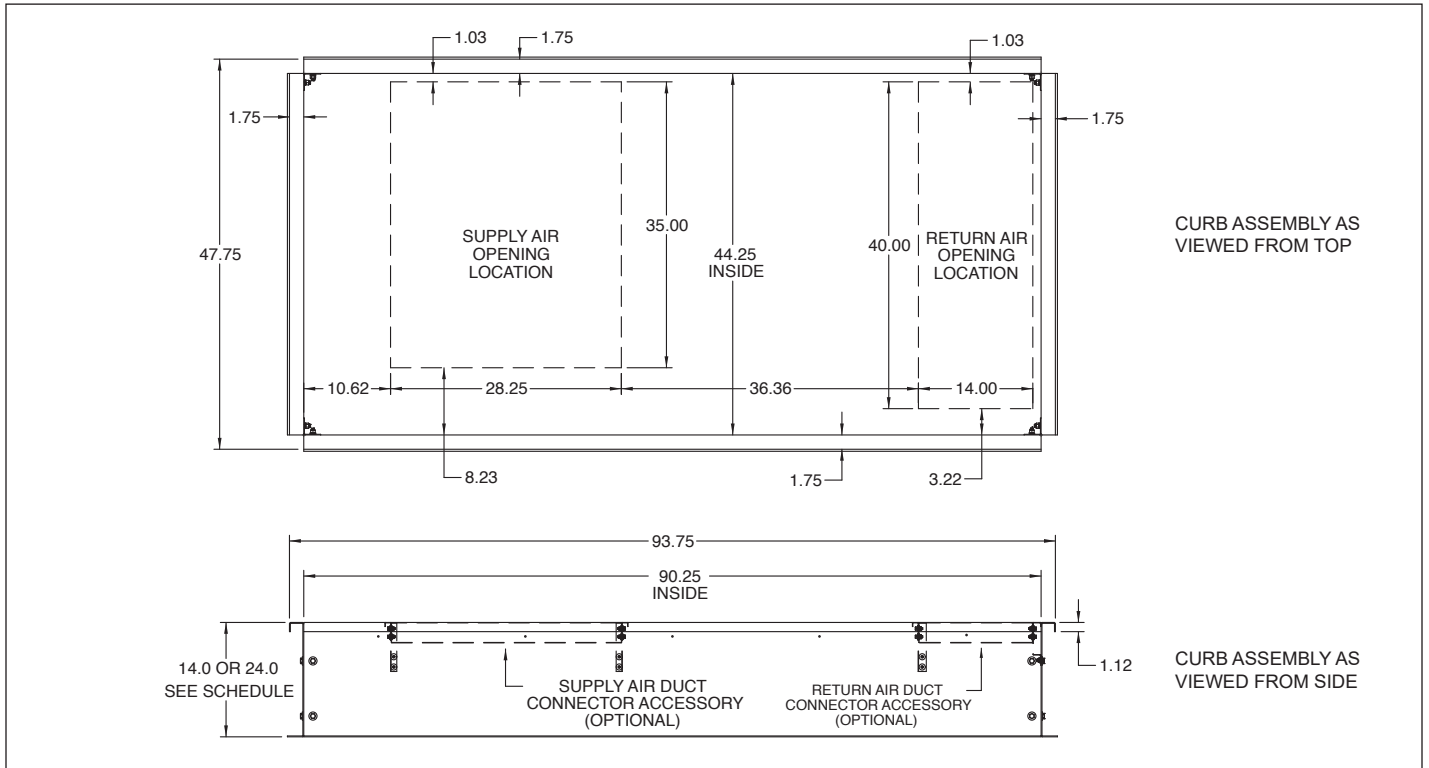
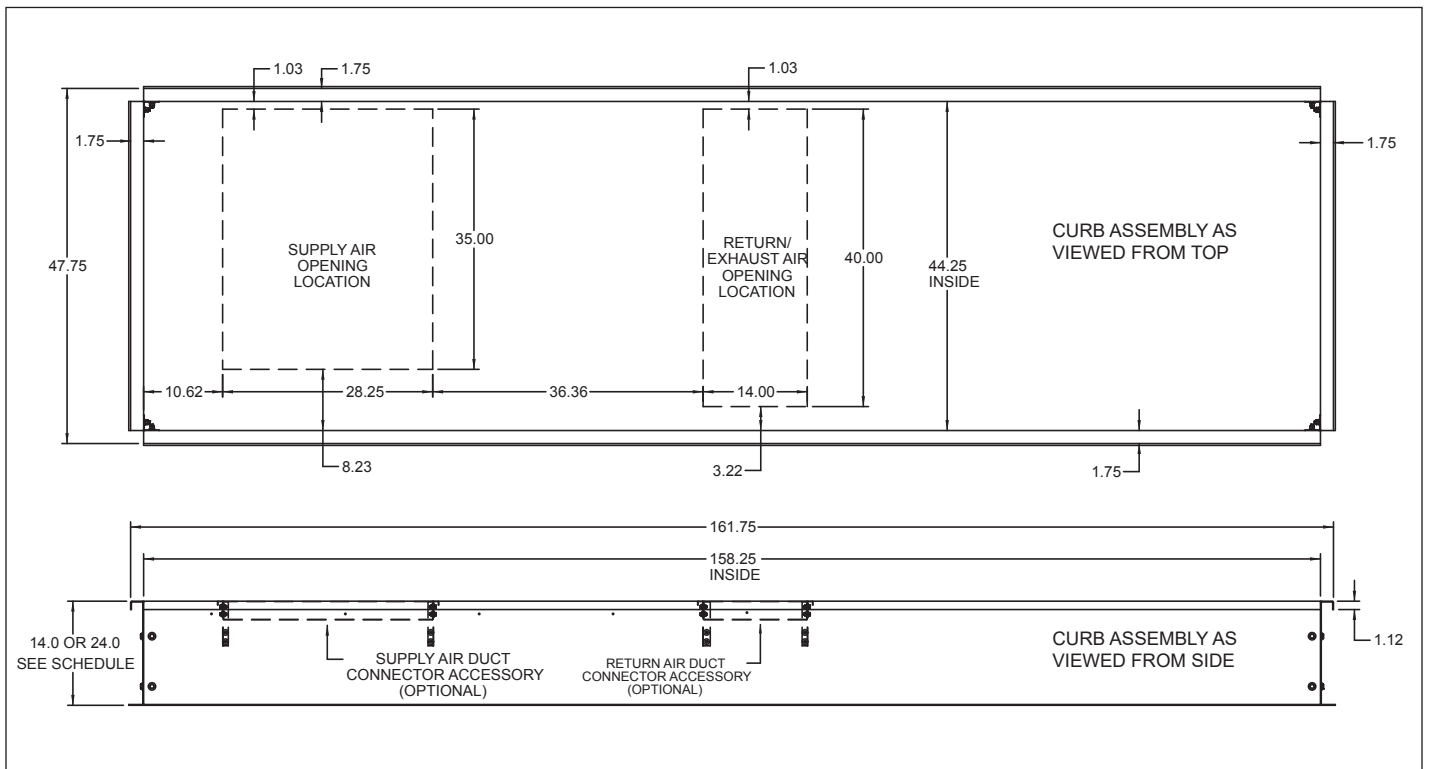


Figure 3.2 - Roof Curb Dimensions for B-Cabinet Size Units WITH Energy Recovery (inches)



ROOF CURB DIMENSIONS - C-CABINET SIZE UNITS

Figure 4.1 - Roof Curb Dimensions for C-Cabinet Size Main Units WITH or WITHOUT Energy Recovery (inches)

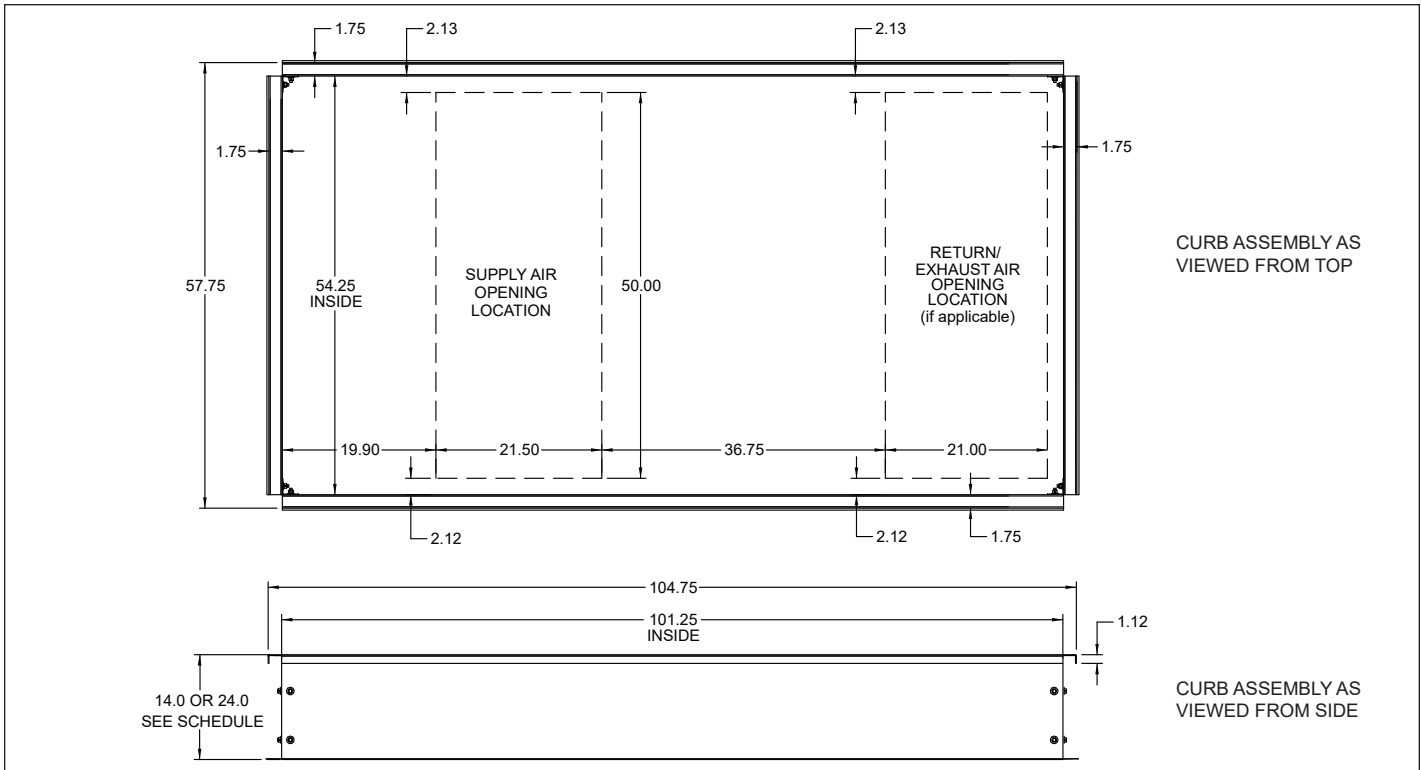
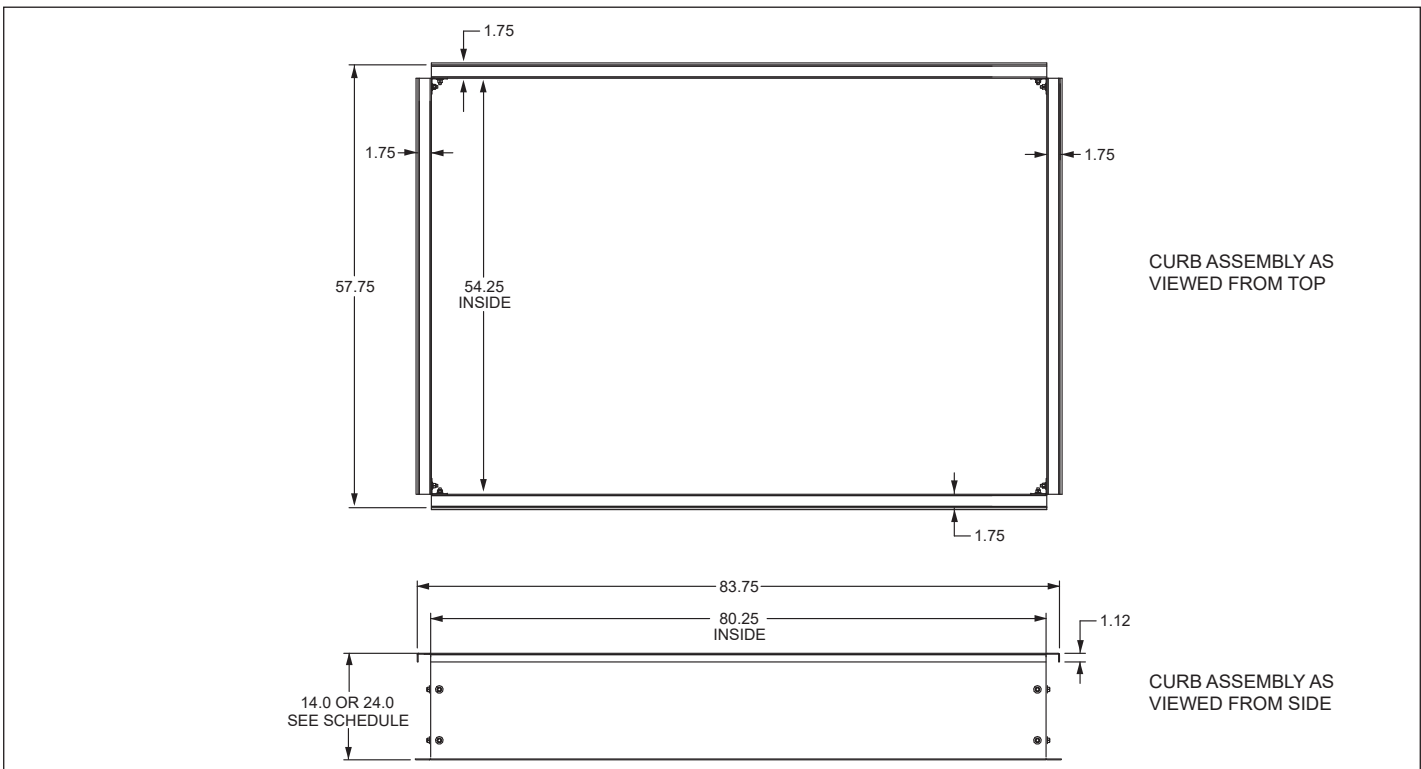


Figure 4.2 - Roof Curb Dimensions for C-Cabinet Size Energy Recovery Module Units (inches)①



① Refer to page 2 for proper placement of the energy recovery module curb from the main unit curb.

ROOF CURB DIMENSIONS - D-CABINET SIZE UNITS

Figure 5.1 - Roof Curb Dimensions for D-Cabinet Size Units WITHOUT Energy Recovery (inches)

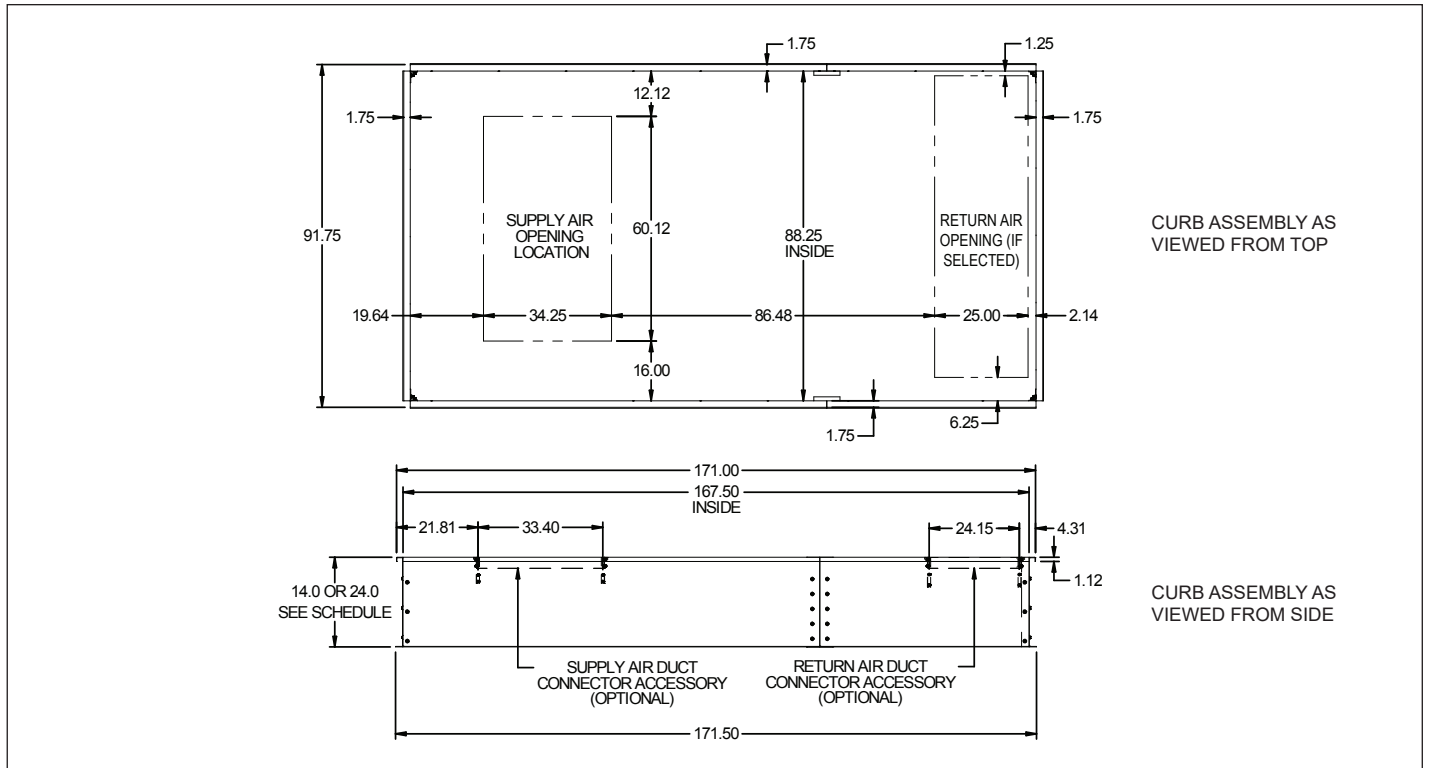
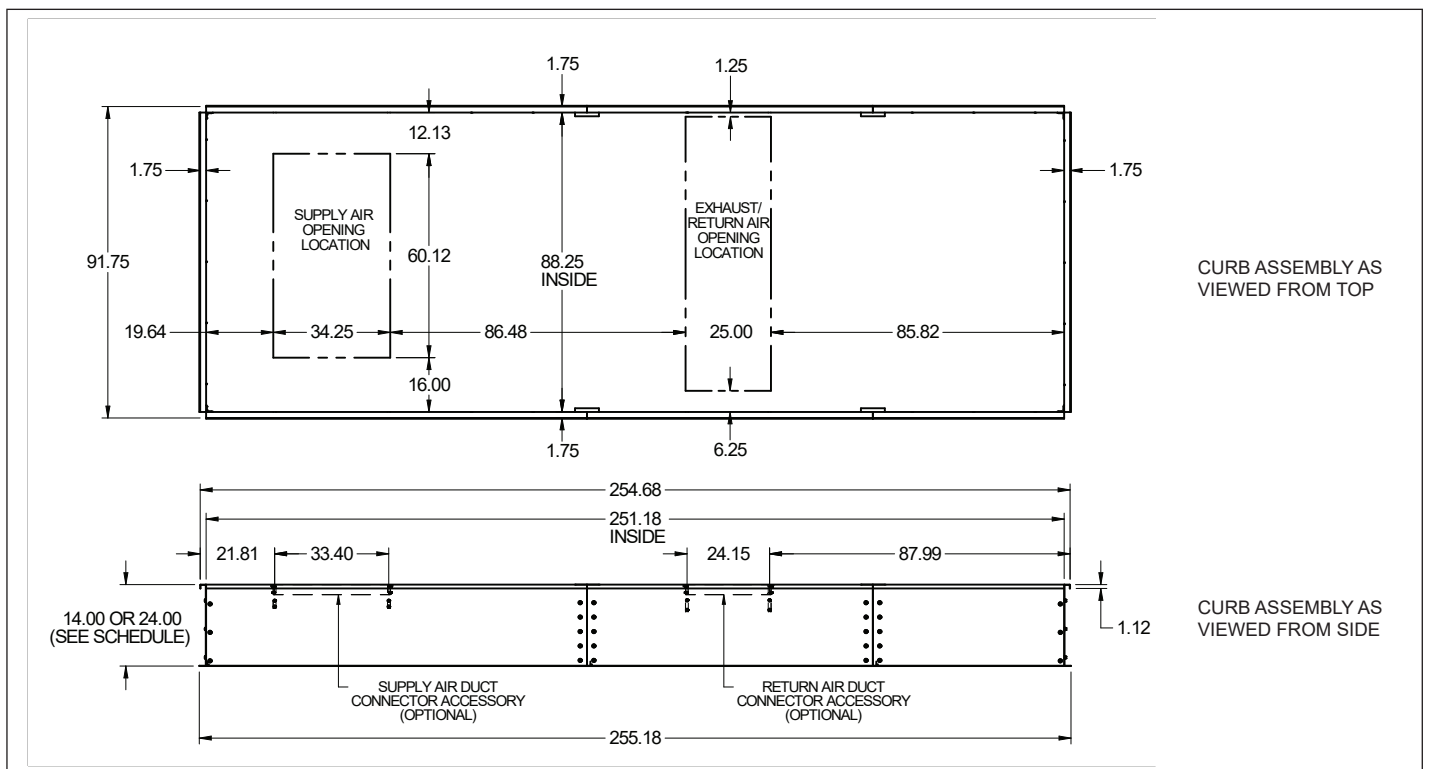


Figure 5.2 - Roof Curb Dimensions for D-Cabinet Size Units WITH Energy Recovery (inches)



DUCT CONNECTOR ASSEMBLY / INSTALLATION

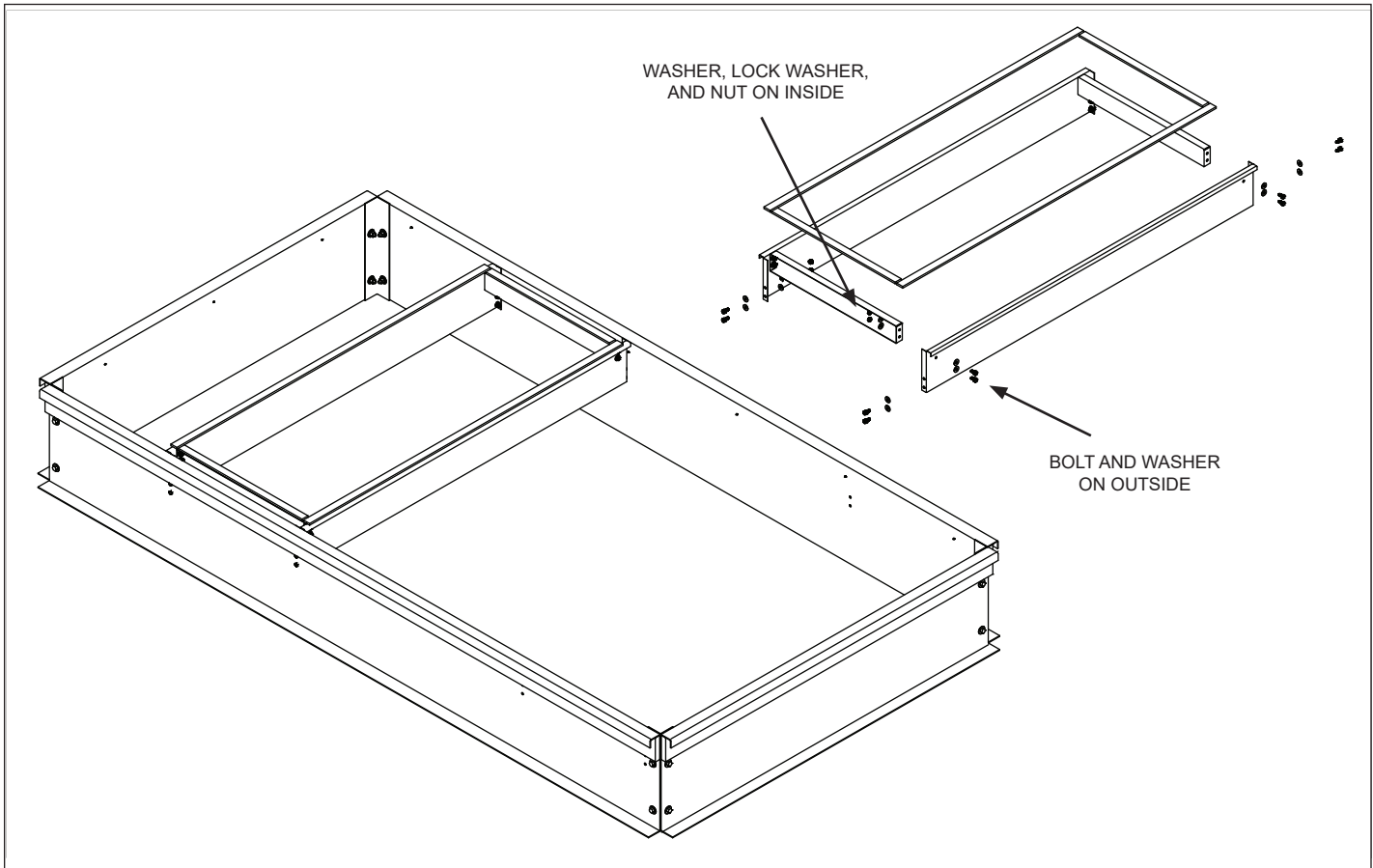
Application of Duct Connectors

Supply and/or return air duct connectors are used in conjunction with the roof curb to allow ductwork connections to be made before the unit arrives at the job site. When installed in the roof curb, the connectors create a mating surface at the height of the bottom of the unit base. After placement of the unit, the installed unit weight holds the bottom of the unit to the connectors so no additional fastening method is required.

Assembly & Installation Instructions

1. Assemble the roof curb as instructed on page 2.
2. Included with each kit (supply and return, as applicable) are two duct connector spreaders, two duct connector cross channels, nuts, bolts, washers, and gasketing.
3. Inspect the duct connector components for damage and check dimensions to be sure the correct connectors are being installed.
4. Assemble the supply and/or return air connector(s) as shown in Figure 6.1. The top surface must be level and straight to insure airtight connection. All corners must be square.
5. Determine the proper side of the roof curb on which to install the connector, based on the configuration of the unit being installed.
6. Locate the connector mounting holes in the roof curb. Refer to dimensions on page 3 (B-cabinet), page 4 (C-cabinet), or page 5 (D-cabinet) for location. When installing only one connector, it is important to determine the proper side of the roof curb on which to install the connector. The location of the duct connector must match the configuration of the ordered unit.
7. Install the duct connector using the remaining nuts, bolts, and washers as shown in Figure 6.1.
8. Insert the 90° flanged ductwork (by others) into the connector. Once inserted, fasten the ductwork to the connector assembly sides from inside the ductwork using horizontally driven sheet metal screws (by others).
9. Prior to unit installation, install the gasketing that was included with the connector or caulk the top of the connector(s).

Figure 6.1 – Duct Connector Assembly



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