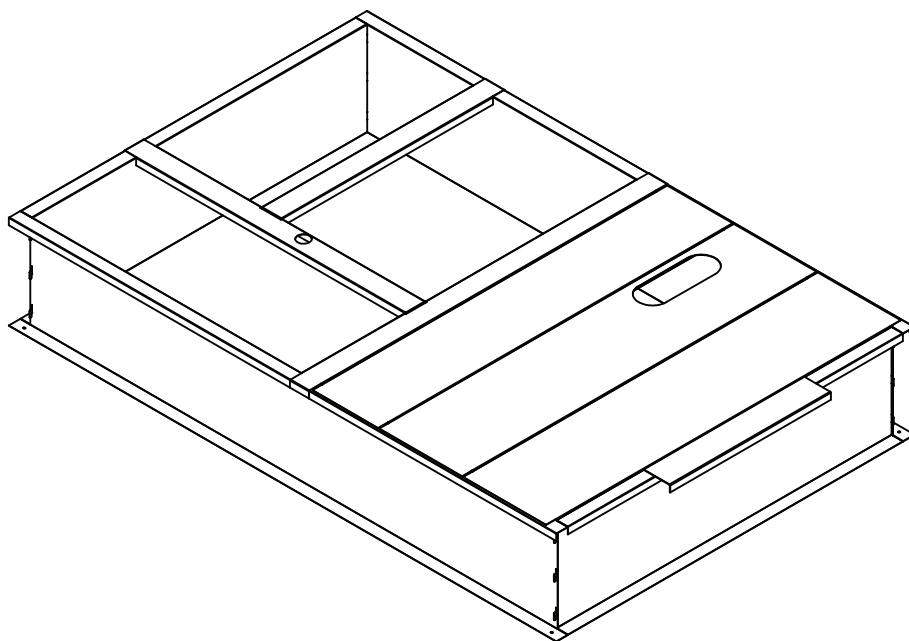


Installation Instructions

Roof Curb

Foundation™ Packaged Rooftop Units

7.5 to 12.5 Tons



Model Number: Used with:

BAYCURB310* EDK090-150, GDK090-150

▲ SAFETY WARNING

Only qualified personnel should install and service the equipment. The installation, starting up, and servicing of heating, ventilating, and air-conditioning equipment can be hazardous and requires specific knowledge and training. Improperly installed, adjusted or altered equipment by an unqualified person could result in death or serious injury. When working on the equipment, observe all precautions in the literature and on the tags, stickers, and labels that are attached to the equipment.

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Introduction

Read this manual thoroughly before operating or servicing this unit.

Warnings, Cautions, and Notices

Safety advisories appear throughout this manual as required. Your personal safety and the proper operation of this machine depend upon the strict observance of these precautions.

The three types of advisories are defined as follows:



Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury. It could also be used to alert against unsafe practices.

NOTICE

Indicates a situation that could result in equipment or property-damage only accidents.

Important Environmental Concerns

Scientific research has shown that certain man-made chemicals can affect the earth's naturally occurring stratospheric ozone layer when released to the atmosphere. In particular, several of the identified chemicals that may affect the ozone layer are refrigerants that contain Chlorine, Fluorine and Carbon (CFCs) and those containing Hydrogen, Chlorine, Fluorine and Carbon (HCFCs). Not all refrigerants containing these compounds have the same potential impact to the environment. Trane advocates the responsible handling of all refrigerants.

Important Responsible Refrigerant Practices

Trane believes that responsible refrigerant practices are important to the environment, our customers, and the air conditioning industry. All technicians who handle refrigerants must be certified according to local rules. For the USA, the Federal Clean Air Act (Section 608) sets forth the requirements for handling, reclaiming, recovering and recycling of certain refrigerants and the equipment that is used in these service procedures. In addition, some states or municipalities may have additional requirements that must also be adhered to for responsible management of refrigerants. Know the applicable laws and follow them.

WARNING

Proper Field Wiring and Grounding Required!

Failure to follow code could result in death or serious injury.

All field wiring MUST be performed by qualified personnel. Improperly installed and grounded field wiring poses FIRE and ELECTROCUTION hazards. To avoid these hazards, you MUST follow requirements for field wiring installation and grounding as described in NEC and your local/state/national electrical codes.

WARNING

Personal Protective Equipment (PPE) Required!

Failure to wear proper PPE for the job being undertaken could result in death or serious injury.

Technicians, in order to protect themselves from potential electrical, mechanical, and chemical hazards, **MUST follow precautions in this manual and on the tags, stickers, and labels, as well as the instructions below:**

- **Before installing/servicing this unit, technicians MUST put on all PPE required for the work being undertaken (Examples; cut resistant gloves/sleeves, butyl gloves, safety glasses, hard hat/bump cap, fall protection, electrical PPE and arc flash clothing). ALWAYS refer to appropriate Safety Data Sheets (SDS) and OSHA guidelines for proper PPE.**
- **When working with or around hazardous chemicals, ALWAYS refer to the appropriate SDS and OSHA/GHS (Global Harmonized System of Classification and Labelling of Chemicals) guidelines for information on allowable personal exposure levels, proper respiratory protection and handling instructions.**
- **If there is a risk of energized electrical contact, arc, or flash, technicians MUST put on all PPE in accordance with OSHA, NFPA 70E, or other country-specific requirements for arc flash protection, PRIOR to servicing the unit. NEVER PERFORM ANY SWITCHING, DISCONNECTING, OR VOLTAGE TESTING WITHOUT PROPER ELECTRICAL PPE AND ARC FLASH CLOTHING. ENSURE ELECTRICAL METERS AND EQUIPMENT ARE PROPERLY RATED FOR INTENDED VOLTAGE.**

⚠ WARNING**Follow EHS Policies!**

Failure to follow instructions below could result in death or serious injury.

- All Trane personnel must follow the company's Environmental, Health and Safety (EHS) policies when performing work such as hot work, electrical, fall protection, lockout/tagout, refrigerant handling, etc. Where local regulations are more stringent than these policies, those regulations supersede these policies.
- Non-Trane personnel should always follow local regulations.

⚠ WARNING**R-454B Flammable A2L Refrigerant!**

Failure to use proper equipment or components as described below could result in equipment failure, and possibly fire, which could result in death, serious injury, or equipment damage.

The equipment described in this manual uses R-454B refrigerant which is flammable (A2L). Use **ONLY** R-454B rated service equipment and components. For specific handling concerns with R-454B, contact your local representative.

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General Information

This manual describes the layout and installation procedures to properly assemble and install the roof curb. Illustrations are provided for dimensional data regarding roof opening construction. Each curb package ships un-assembled, along with the required hardware and gasketing material. Roof insulation, cant strips, flashing (if desired), and nails must be furnished by the installing contractor.

Inspection

1. Unpack all components of the kit.
2. Check carefully for shipping damage. If any damage is found, report it immediately, and file a claim against the transportation company.

Parts List

Table 1. Parts list

Qty	Description
2	Side Rails
2	End Rails
1	Side Curb Flange
1	End Curb Flange
4	Insulated Block-off Panels
—	Gasketing Material
—	Sheet Metal Screws

Roof Opening

For safety and sound considerations, do not cut out the entire roof deck within the curb area.

Roof Support

⚠ WARNING

Risk of Roof Collapsing!

Failure to ensure proper structural roof support could cause the roof to collapse, which could result in death or serious injury and property damage.

Confirm with a structural engineer that the roof structure is strong enough to support the combined weight of the roofcurb, the unit, and any accessories.

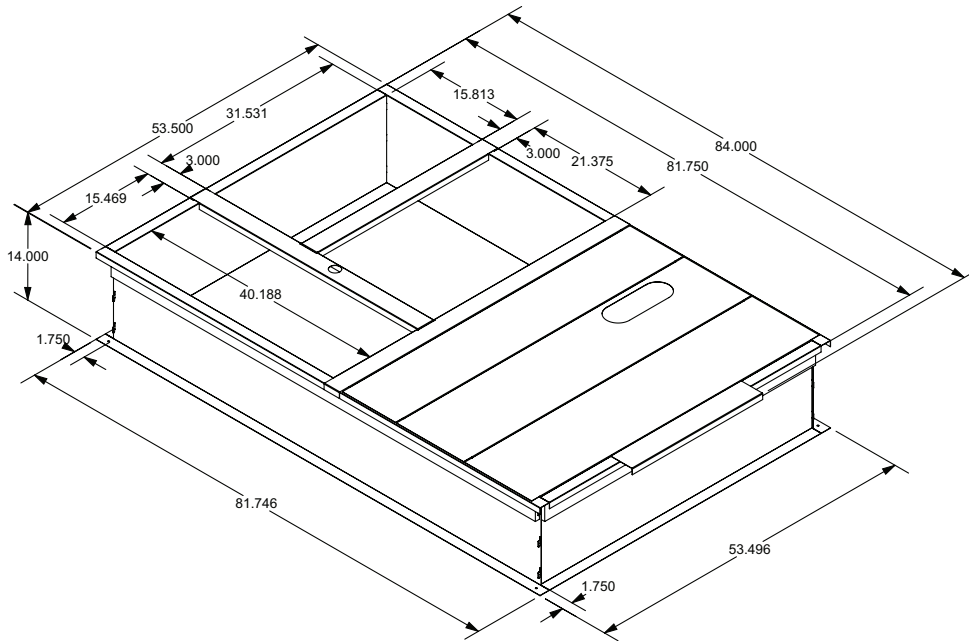
The roof must be capable of adequately supporting the weight of the rooftop unit, accessories, and curb. See [Figure 2, p. 5](#) and for specific center-of-gravity and corner weight information. Units may be set either perpendicular or parallel to roof support members. The combined weight of the unit, accessories, and curb should be evenly spaced between a minimum of two supports. Confirm the curb's position on the roof support does not interfere with the clearance required for the supply/return ductwork.

Clearances

See [Figure 1, p. 5](#) for the recommended clearances for single-unit installation. These minimum requirements are not only an important consideration when determining unit placement, but are also essential to verify adequate serviceability, maximum capacity, and peak operating efficiency. Any reduction of the unit clearances indicated in this illustration may result in condenser coil starvation, or the recirculation of warm condenser air. Review inadequate clearances with a local sales engineer.

Note: *Unit weights are maximum valve of horizontal and downflow configuration, with oversized motor and largest heater installed in units.*

Figure 1. Roof curb dimensions



Tons	Unit Model No.	Weights (lb) ^(a) , ^(b)		Corner Weights ^(c)				Center of Gravity (in.)	
		Shipping	Net	A	B	C	D	Length	Width
7.5	GDK090A	1087	1025	247	246	265	267	44	33
8.5	GDK102A	1124	1063	254	246	275	287	43	35
10	GDK120A	1157	1096	289	242	257	317	38	33
12.5	GDK150A	1237	1175	306	257	278	344	38	34
7.5	EDK090A	979	917	221	220	237	238	44	33
8.5	EDK102A	1016	955	228	221	247	258	43	35
10	EDK120A	1047	985	260	217	231	284	38	33
12.5	EDK150A	1127	1065	277	233	252	311	38	34

^(a) Weights are approximate. Horizontal and downflow unit and corner weights may vary slightly.

^(b) Weights do not include additional factory or field installed options/accessories.

^(c) Corner weights are given for information only. 7.5 to 12.5 ton models must be supported continuously by a curb or equivalent frame support.

Figure 2. Center of gravity/corner weights

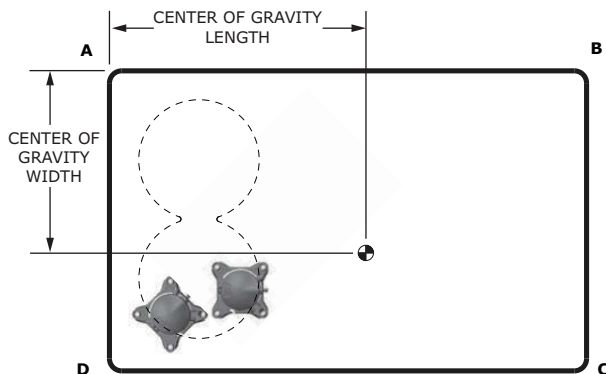


Table 2. Curbs weight (net lbs.)

Curb	Weights
BAYCURB310*	110

Installation

Carefully review installation instructions. To mount the roof curb on a new building, assemble it at any convenient location and install immediately after the roof support members are in place.

Important: The curb should be placed directly on the roof support members.

Use tack welding or other suitable fastening method to secure the roof curb in place. To mount the curb on a roof deck, additional nailing plates must be provided directly below the flanges of the curb to give further support and to minimize vibration. See Figure 5, p. 6 and Figure 6, p. 7.

Curb Installation

1. Pre-assemble the curb as shown in Figure 3, p. 6 and Figure 4, p. 6.
2. Set the curb in the proper position around the roof opening.
3. The curb must be leveled to ensure proper flow of condensate from the unit. The maximum pitch of the roof curb down from the access side of the unit (See Figure 1, p. 5) is 1/16 inch per foot. To check the flatness of the curb, stretch lines diagonally between opposite corners of the assembled curb. The distance between the lines (at their point of intersection) should not exceed 1/4 inch. If the lines touch, reverse them (place the top line on the bottom and the bottom line on top), and recheck the point of intersection. Shim under the curb as necessary.
4. Check the curb assembly for squareness by measuring diagonally between opposite corners of the curb. The distance indicated by these measurements should be the same.
5. Fasten the curb to the roof support members, or roof deck. See Figure 5, p. 6 and Figure 6, p. 7.
6. Bring the roof material up to the curb as shown in Figure 5, p. 6 and Figure 6, p. 7. Place a piece of rigid insulation around the curb and fasten it (from the inside), with nails.
7. Install cant strips as shown in Figure 5, p. 6 of either 4 in. x 4 in. wood (cut diagonally in half), or other suitable material. With the cant strips in place, bring the roofing felts up to the top of the curb nailing strips. Push the felts up under the lip of the curb and nail them tightly into position.

Note: Any pipes or electrical conduits which extend through the roof must be flashed with a sleeve and roof flange extending a minimum of 8 inches above the roof surface.

8. The roof curb installation is now complete and ready for ductwork and unit installation.

Figure 3. Curb rail assembly

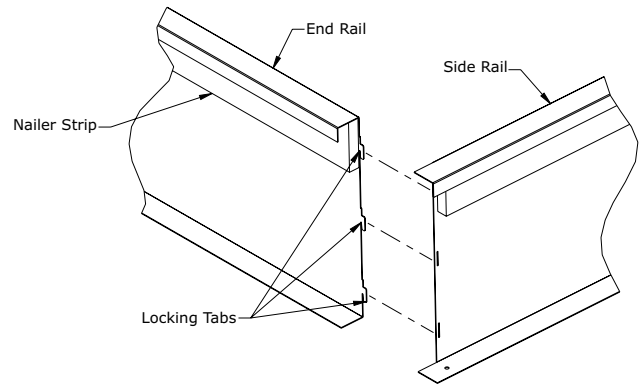


Figure 4. Installing gasket material

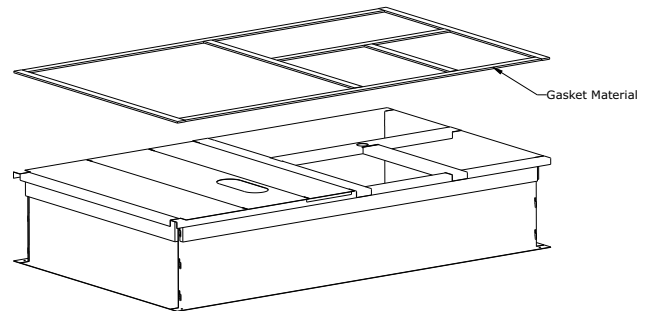


Figure 5. Typical installation on new construction

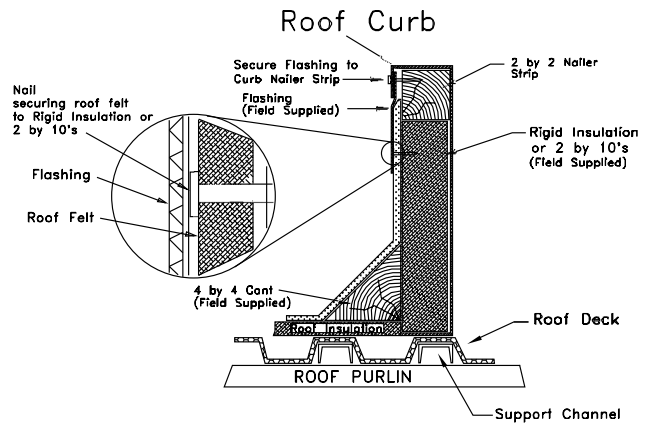
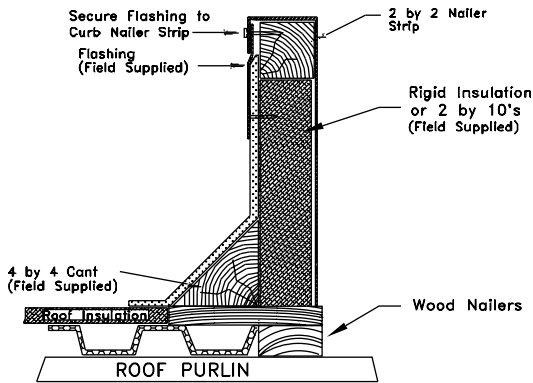


Figure 6. Typical installation on existing construction



Supply and Return Air Ductwork

- When flexible duct is not desired, metal or fiberboard duct may be installed.
- The metal or fiberboard duct must conform to all local building codes.
- The duct must be hung from the curb flanges inside the curb walls.

Important: Duct work must be hung from the curb flanges. It must not be installed over the top edges of the curb.

- When the duct is fabricated it should be large enough to cover the openings for the return and supply sides of the unit, but the flanges must be narrow enough to slide down inside the curb.

Important: All duct work that attaches to the curb, must be in place and secured before the unit is set.

- Follow SMACNA recommendations closely to verify proper duct construction and installation.

Note: All field fabricated panels used must be insulated.

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