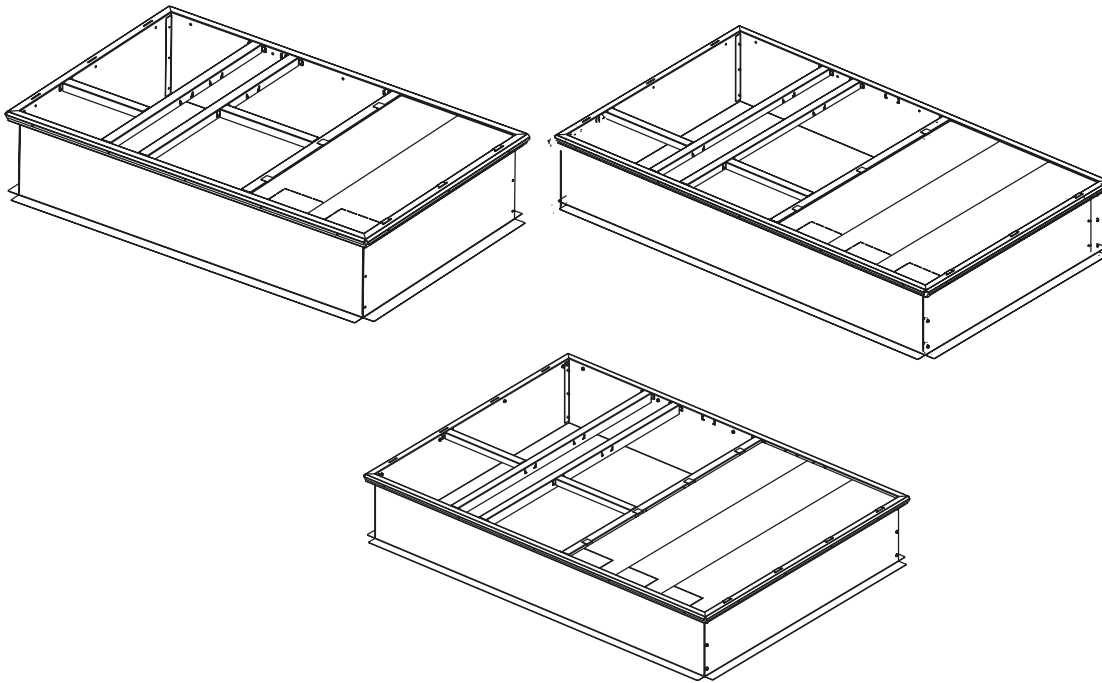


# Installation Instructions

## Roof Curb

### Precedent™ Packaged Rooftop Units 3 to 10 Tons



**Model Numbers:**

FIACURB402\*

FIACURB802\*

**Used With:**

Precedent B cabinet (Digit 39 = B) with 14-inch curb

Precedent B cabinet (Digit 39 = B) with 18-inch curb

**⚠ 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.

# 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:

- ⚠ WARNING** Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
- ⚠ CAUTION** 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 Labeling 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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## Revision History

- Updated used with model information on front cover.
- Updated General Information chapter.
- Updated Installation chapter.
- Updated Weights and Center of Gravity chapter.

# General Information

- Carefully review installation instructions.
- This manual describes the layout and installation procedures required to properly assemble and install the roof curb.
- Each curb package ships unassembled, along with the required hardware and gasketing material. Roof insulation, cant strips, flashing (if desired), nails, and sheet metal screws must be furnished by the installing contractor.

**Important:** ***DO NOT discard EPS foam panels included in this kit. They are used for insulating the condenser section of the roof curb. Follow instructions for installation.***

## 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.

## Clearances

The recommended clearances for single-unit installations (minimum requirements) are not only an important consideration when determining unit placement, but they are also essential to ensure adequate serviceability, maximum capacity, and peak operation efficiency.

Any reduction of the unit clearances indicated in these illustrations may result in condenser coil starvation, or the recirculation of warm condenser air. Actual clearances which appear to be inadequate should be reviewed with a local sales engineer.

# Installation

- Carefully review installation instructions.
- If the curb will be mounted on a new building, assemble the curb before roof support members are in place.
- Place the curb directly on the roof support members.
- Use tack welding or other suitable fastening method to secure the roof curb in place.

**Notes:**

- If the curb will be mounted on a roof deck, additional nailing plates must be provided directly below the flanges of the curb for additional support, and to minimize vibration.
- When the installation is on an existing building, hoist the shipping container directly onto the roof.

## Supply and Return Air Ductwork

Before setting the unit in place, run ductwork and attach to the curb.

All ductwork must be fabricated and installed by the installing contractor. To verify proper duct construction and installation, SMACNA recommendations should be closely followed.

**Note:** All field fabricated panels used must be insulated. See [Step 10](#).

## Roof Opening

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

## Roof Support

**⚠ WARNING**

**Heavy Objects!**

Failure to follow instructions below could result in unit dropping which could result in death or serious injury, and equipment or property-only damage. Ensure that all the lifting equipment used is properly rated for the weight of the unit being lifted. Each of the cables (chains or slings), hooks, and shackles used to lift the unit must be capable of supporting the entire weight of the unit. Lifting cables (chains or slings) may not be of the same length. Adjust as necessary for even unit lift.

**Important:** Refer to weight tables for specific weights within this piece.

- Units may be set either lateral or parallel to the roof support members.
- The combined weight of the unit, accessories, and curb should be evenly spaced between a minimum of two supports.
- Verify the curb position on the roof supports does not interfere with the clearance required for the supply/return ductwork. See figure [Figure 2, p. 7](#).

**Note:** It is recommended that the starting collars for the supply and return duct work be installed before the curb is placed into position.

## Roof Curb Installation

### Part List

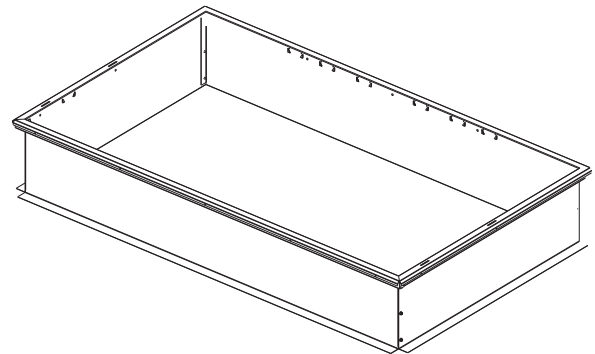
**Table 1. Parts list**

Qty	Description
2	Ends
2	Sides
3	Long duct supports
2	Short duct supports
3	Insulation supports
3	EPS foam insulation sheets
–	Gasket

There are more attachment locations (raised triangular shaped corner slots) than actual component attachments. To assemble the roof curb, use a tape measure to verify components are in the correct orientation. Use the dimensions from the diagram to locate the correct attachment slots for the internal supports.

- Set the two sides and two ends on a flat surface to form a square, with the wood nailers facing the outside. See the following figure.

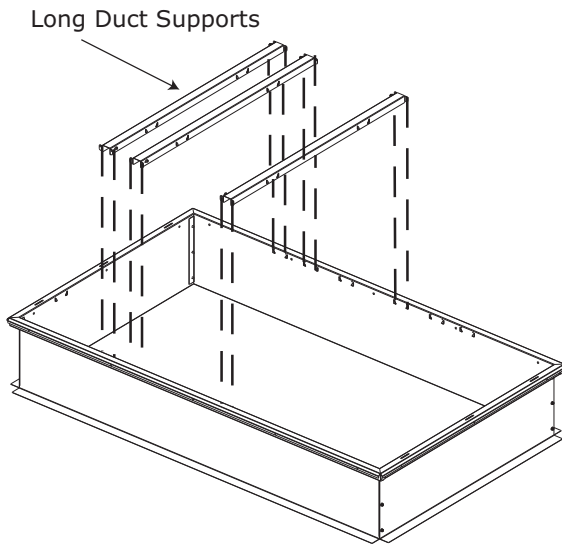
**Note:** Assembling a long duct support will hold the sides in place while fastening ends.



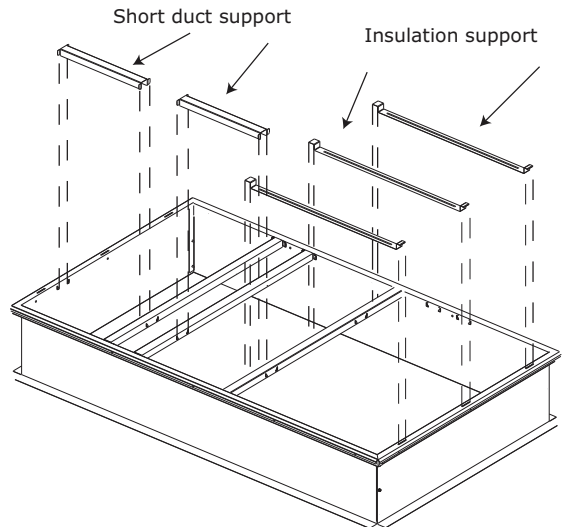
- Join the sides and ends together with the 1/4 x 5/8 screws provided.
- Assemble a long (46.18 inch) duct support between the two sides (return section).

## Installation

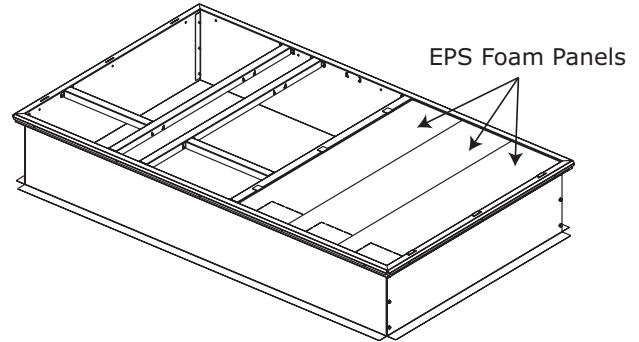
4. Insert the first duct support 18.25 inch from either end by inserting the tabs on each end of the duct support into the appropriate triangular shaped slots. See the following figure.
5. Insert the other two long duct supports shown on the top view (supply section). See the following figure. Verify the 5.18 inch and 18.5 inch dimensions between long duct supports.



6. At 10.25 inches from the side, locate the position for the short duct support that fits between the first long duct support and the end.
7. Insert the support flanges into the appropriate corner catches. Verify the 10.25 inch dimension. See the following figure.
8. Insert the second short duct support between the middle and right long duct supports. Verify the 10.25 inch dimension from the duct support to the side (in line with previously assembled short duct support). See the following figure.



9. Insert the three insulation supports between the right end and the closest long duct support and insert the tabs into the slots in the top of the end piece. See the following figure.



10. Install three pieces of foam insulation and gasket. See the following figure.

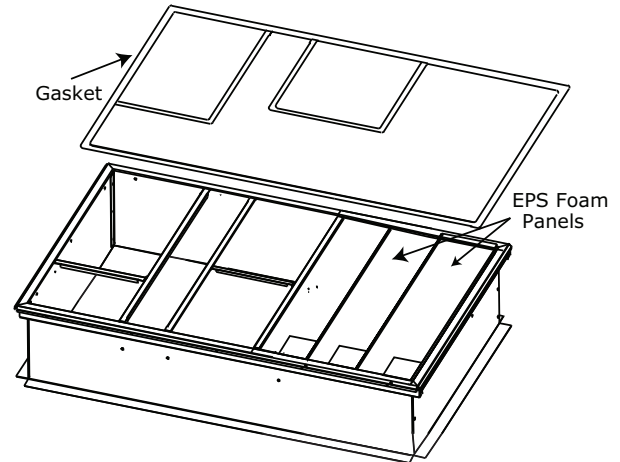
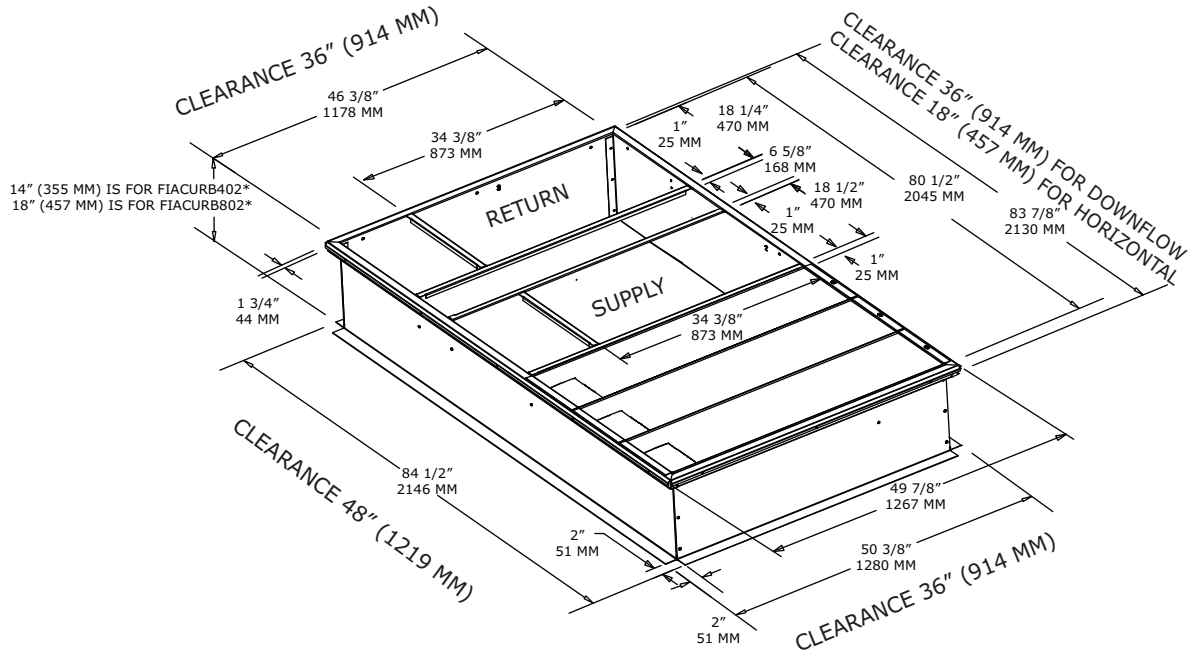
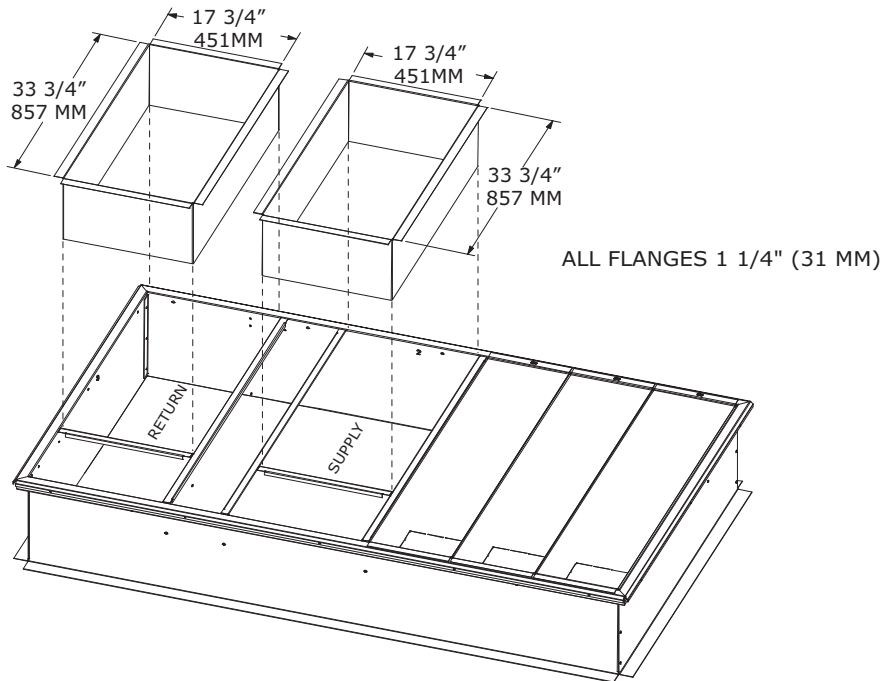


Figure 1. Curb dimensional data



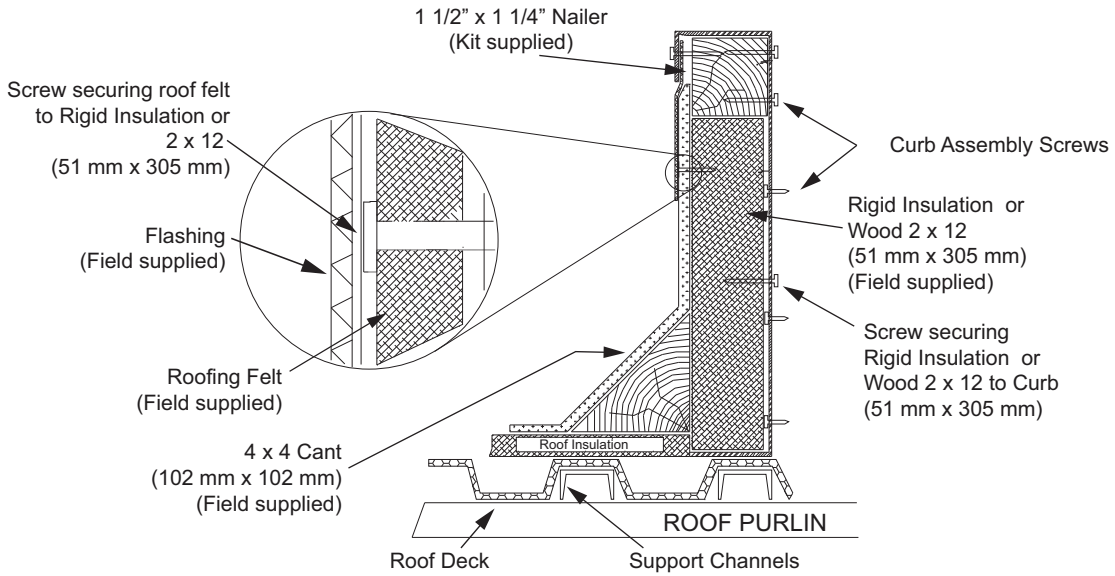
**Note:** Curb plenum drops/duct inserts are designed and tested to hold 250 lbs. Verify duct drops are supported per local building codes.

Figure 2. Curb dimensional data

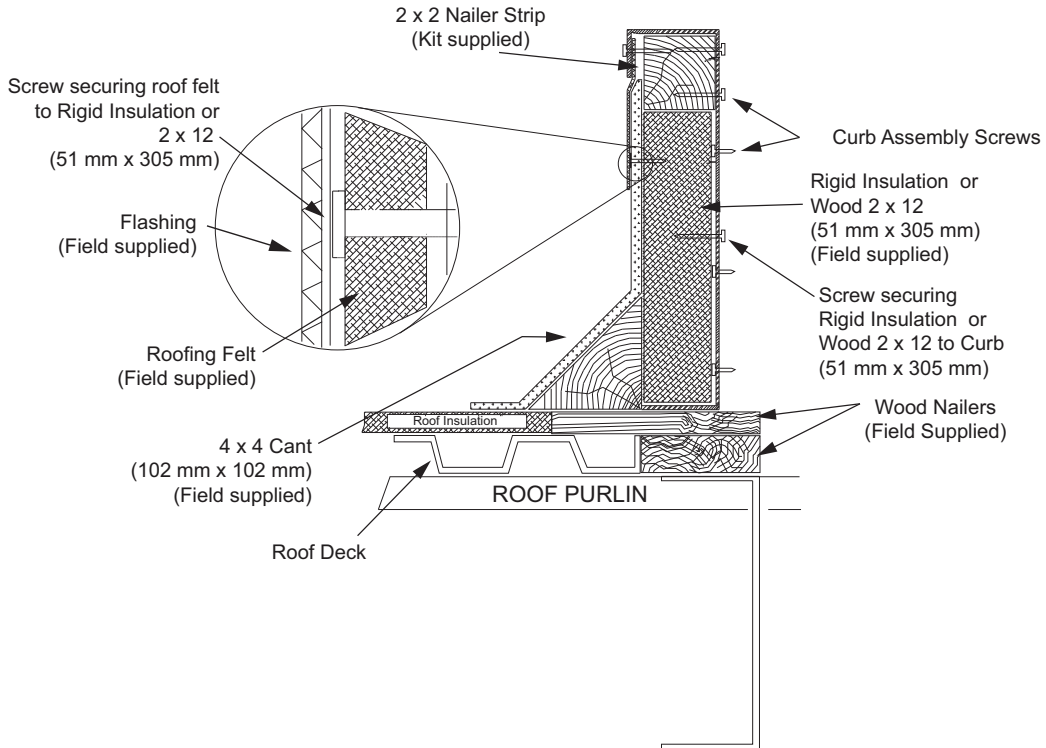


# Installation

**Figure 3. Roof construction**



**Figure 4. Existing roof construction**





# Weights and Center of Gravity

**Table 2. Model weights, corner weights (lbs) and center of gravity dimensions (in.) – cooling/electric**

Tons	Unit Model No.	Model Weights <sup>(a)</sup>		Corner Weights <sup>(b)</sup>				Center of Gravity (in.)	
		Shipping	Net	A	B	C	D	Length	Width
<b>Standard Efficiency</b>									
6	TS*072	986	892	319	267	139	167	41	18
7.5	TS*090	1008	914	327	273	143	171	41	18
8.5	TS*102	1029	935	335	280	146	175	41	18
10	TS*120	1044	950	340	284	148	178	41	18
<b>High Efficiency</b>									
4	TH*048	875	777	293	231	112	142	39	17
5	TH*060	895	797	293	239	119	146	40	18
6	TH*072	986	892	319	267	139	167	41	18
7.5	TH*090	1008	914	327	273	143	171	41	18
8.5	TH*102	1029	935	335	280	146	175	41	18
10	TH*120	1044	950	340	284	148	178	41	18
<b>Ultra High Efficiency</b>									
3	TZ*036	888	790	225	194	171	200	41	25
4	TZ*048	895	797	227	195	173	201	41	25
5	TZ*060	903	805	230	197	175	203	41	25
6	TZ*072	908	810	231	198	176	205	41	25
7.5	TZ*090	957	859	213	208	216	221	44	27
8.5	TZ*102	964	866	215	210	218	233	44	27

(a) Weights are approximate. Weights do not include additional factory or field installed options/accessories. For option/accessory additional weights to be added to unit weight, refer to [Table 6, p. 12](#).

(b) Corner weights are given for information only.

## Weights and Center of Gravity

**Table 3. Model weights, corner weights (lbs) and center of gravity dimensions (in.) – gas/electric**

Tons	Unit Model No.	Model Weights <sup>(a)</sup>		Corner Weights <sup>(b)</sup>				Center of Gravity (in.)	
		Shipping	Net	A	B	C	D	Length	Width
<b>Standard Efficiency</b>									
6	YS*072	1031	937	328	279	152	177	41	18
7.5	YS*090	1060	966	338	287	158	183	41	18
8.5	YS*102	1092	998	346	294	295	187	41	19
10	YS*120	1111	1017	354	302	168	193	41	18
<b>High Efficiency</b>									
4	YH*048	922	825	295	251	129	151	41	18
5	YH*060	951	853	304	259	133	156	41	18
6	YH*072	1031	937	328	279	152	177	41	18
7.5	YH*090	1060	966	338	287	158	183	41	18
8.5	YH*102	1092	998	346	294	295	187	41	19
10	YH*120	1111	1017	354	302	168	193	41	18
<b>Ultra High Efficiency</b>									
3	YZ*036	939	841	227	217	194	203	43	25
4	YZ*048	944	846	226	221	197	202	44	25
5	YZ*060	948	850	230	225	195	200	44	25
6	YZ*072	953	855	236	231	191	196	44	24
7.5	YZ*090	1009	911	234	231	221	224	44	26
8.5	YZ*102	1016	918	236	233	221	224	44	26

(a) Weights are approximate. Weights do not include additional factory or field installed options/accessories. For option/accessory additional weights to be added to unit weight, refer to [Table 6, p. 12](#).

(b) Corner weights are given for information only.

**Table 4. Model weights, corner weights (lbs) and center of gravity dimensions (in.) – heat pump/electric**

Tons	Unit Model No.	Model Weights <sup>(a)</sup>		Corner Weights <sup>(b)</sup>				Center of Gravity (in.)	
		Shipping	Net	A	B	C	D	Length	Width
<b>Standard Efficiency</b>									
6	WS*072	1010	918	248	230	210	230	42	20
7.5	WS*090	1029	931	250	231	211	231	42	25
8.5	WS*102	1043	945	263	236	211	235	42	25
10	WS*120	1433	1239	363	380	249	247	48	30
<b>High Efficiency</b>									
3	WH*036	908	810	239	204	169	198	41	24
4	WH*048	936	838	252	226	201	225	41	24
5	WH*060	943	845	241	206	184	215	41	25
6	WH*072	1011	918	256	230	210	230	42	25
7.5	WH*090	1026	928	259	229	204	231	42	25
8.5	WH*102	1047	949	265	237	211	236	42	25

(a) Weights are approximate. Weights do not include additional factory or field installed options/accessories. For option/accessory additional weights to be added to unit weight, refer to [Table 6, p. 12](#).

(b) Corner weights are given for information only.

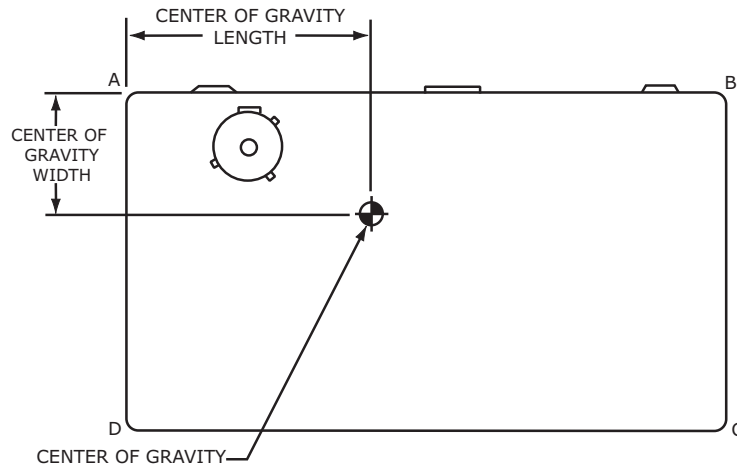
## Weights and Center of Gravity

**Table 5. Model weights, corner weights (lbs) and center of gravity dimensions (in.) – heat pump/gas – dual fuel**

Tons	Unit Model No.	Model Weights <sup>(a)</sup>		Corner Weights <sup>(b)</sup>				Center of Gravity (in.)	
		Shipping	Net	A	B	C	D	Length	Width
<b>Standard Efficiency</b>									
6	DS*072	1048	950	294	269	174	214	42	25
7.5	DS*090	1071	973	308	274	176	216	42	25
8.5	DS*102	1083	985	312	277	179	218	42	25
10	DS*120	1500	1306	356	328	299	323	48	30
<b>High Efficiency</b>									
3	DH*036	975	877	245	219	195	218	42	25
4	DH*048	1003	905	252	226	201	225	42	25
5	DH*060	1010	912	254	227	203	227	42	25
6	DH*072	1048	950	294	269	174	214	42	25
7.5	DH*090	1071	973	308	274	176	216	42	25
8.5	DH*102	1083	985	312	277	179	218	42	25

(a) Weights are approximate. Weights do not include additional factory or field installed options/accessories. For option/accessory additional weights to be added to unit weight, refer to [Table 6, p. 12](#).  
 (b) Corner weights are given for information only.

**Figure 5. Center of gravity**



## Weights and Center of Gravity

Figure 6. Center of gravity

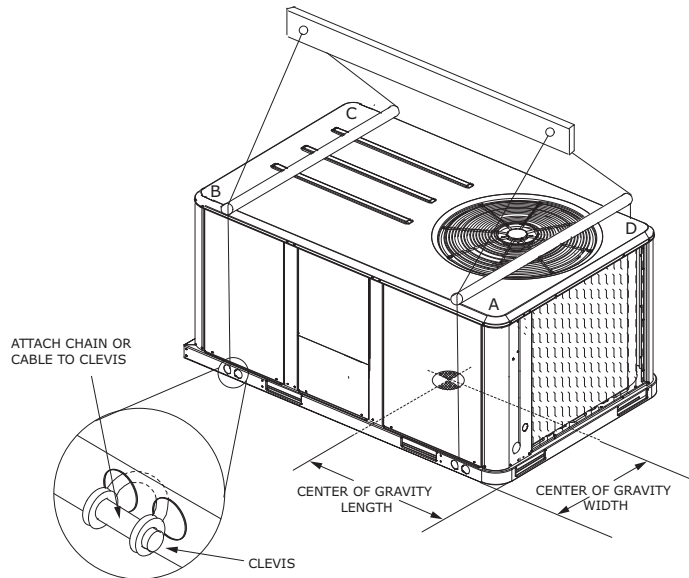


Table 6. Factory installed options (fiops)/accessory net weights (lbs)

Accessory	3 to 10 Tons
Barometric Relief	10
Economizer	36
Electric Heaters <sup>(a)</sup>	44
Hinged Doors	12
Low Leak Economizer - Downflow	91
Low Leak Economizer - Horizontal	186
Manual Outside Air Damper	26
Motorized Outside Air Damper	30
Oversized Motor <sup>(b)</sup>	14
Powered Convenience Outlet	38
Powered Exhaust	80
Reheat Coil	16
Roof Curb	105
Smoke Detector, Supply <sup>(b)</sup>	5
Smoke Detector, Return	7
Stainless Steel Heat Exchanger <sup>(c)</sup>	6
Through-the-Base Electrical	13
Through-the-Base Gas <sup>(c)</sup>	5
Unit Mounted Circuit Breaker	10
Unit Mounted Disconnect	5

**Notes:**

- Weights for options not listed are less than 5 pounds.
- Net weight should be added to unit weight when ordering factory-installed accessories.
- Weights are approximate.

(a) Only applies to T/W\*K models.

(b) Not available on all models.

(c) Only applies to Y/D\*K models.



**Notes**

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