

**INSTALLATION INSTRUCTIONS FOR ROOF MOUNTING FRAMES  
 USED ON LGH/LCH 156-360 AND SC/SG/SW/SR 240 & 288 DOWNFLOW UNITS**

**Frame Parts Identification**

See figure 1 for parts identification.

**Application**

Roof mounting frames provide support in downflow applications. See table 1.

Cross support location for LGH/LCH 156, 180, 210, 240, 300S (13, 15, 17-1/2, 20, 25 ton) units is different than cross support location for LGH/LCH 242H, 300H, 360H (21, 25, 30 ton), SG/SC 240 & 288 (20 & 24 ton), and SW/SR 240 (20 ton) units. Center supports for 14" frames are two pieces.

The mounting frames can be installed directly on deck having adequate structural strength or on roof supports under deck. See figure 2, 3, or 4 for frame dimensions and location of supply and return air plenums. See figure 5 for service clearance dimensions.

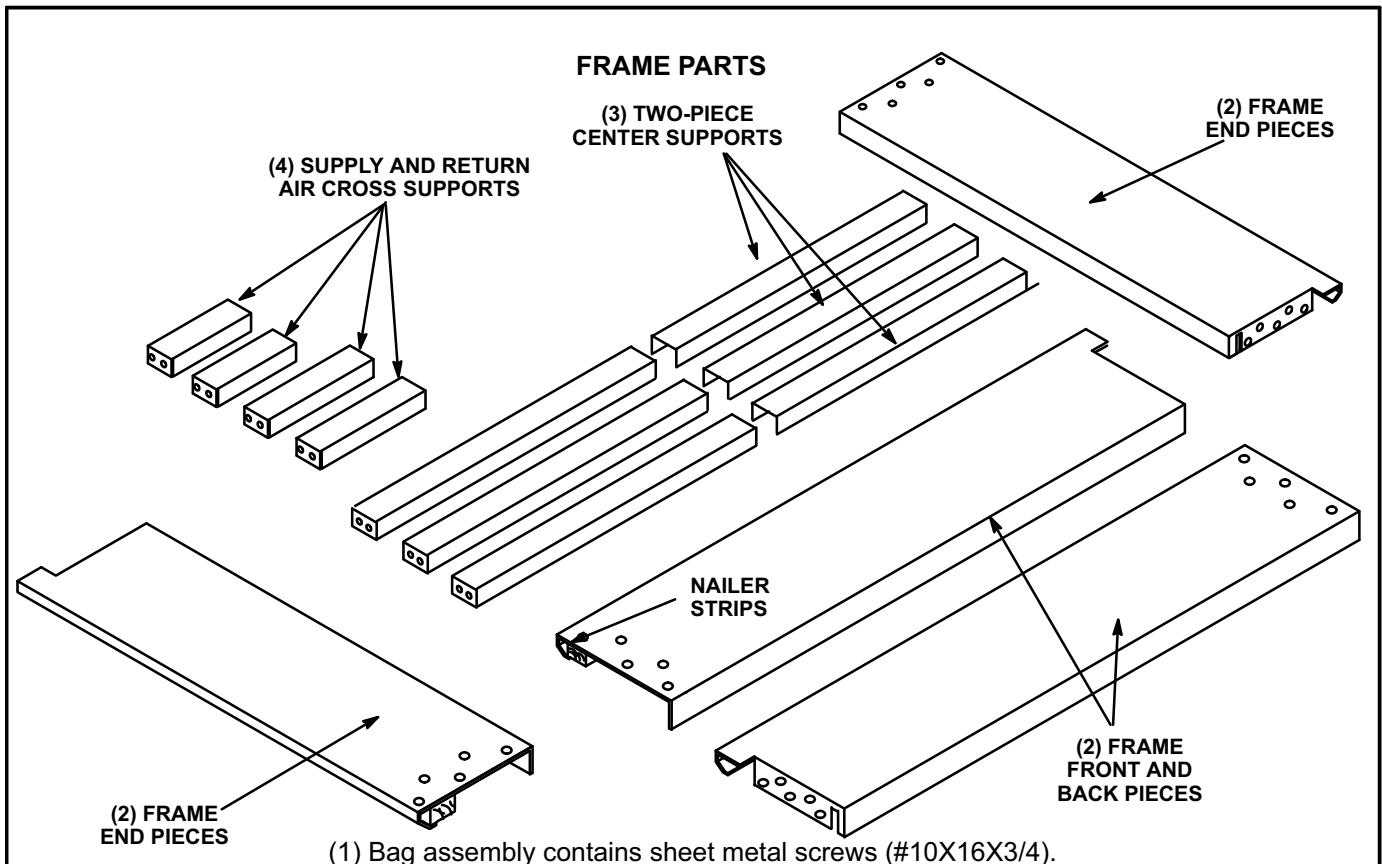
*NOTE-Frame assembly must be installed level within 1/16" per linear foot in any direction.*

*Exception:*

*1/16" per linear foot to 3/8" per linear foot roof pitch (5mm per linear meter to 30mm per linear meter)—Roof curb can be installed level to the roof pitch only if the unit outdoor air intake is oriented toward the higher side of the roof pitch.*

**TABLE 1**

Unit	Mounting Frame	Cat. No.
LGH/LCH 156-360	LARMF18/36 - 14	16K87 (LB-68883A)
LGH/LCH242H, 300H & 360H SG/SC 240 & 288 SW/SR 240	S6CURB10121	30W15 (LB-113934A)



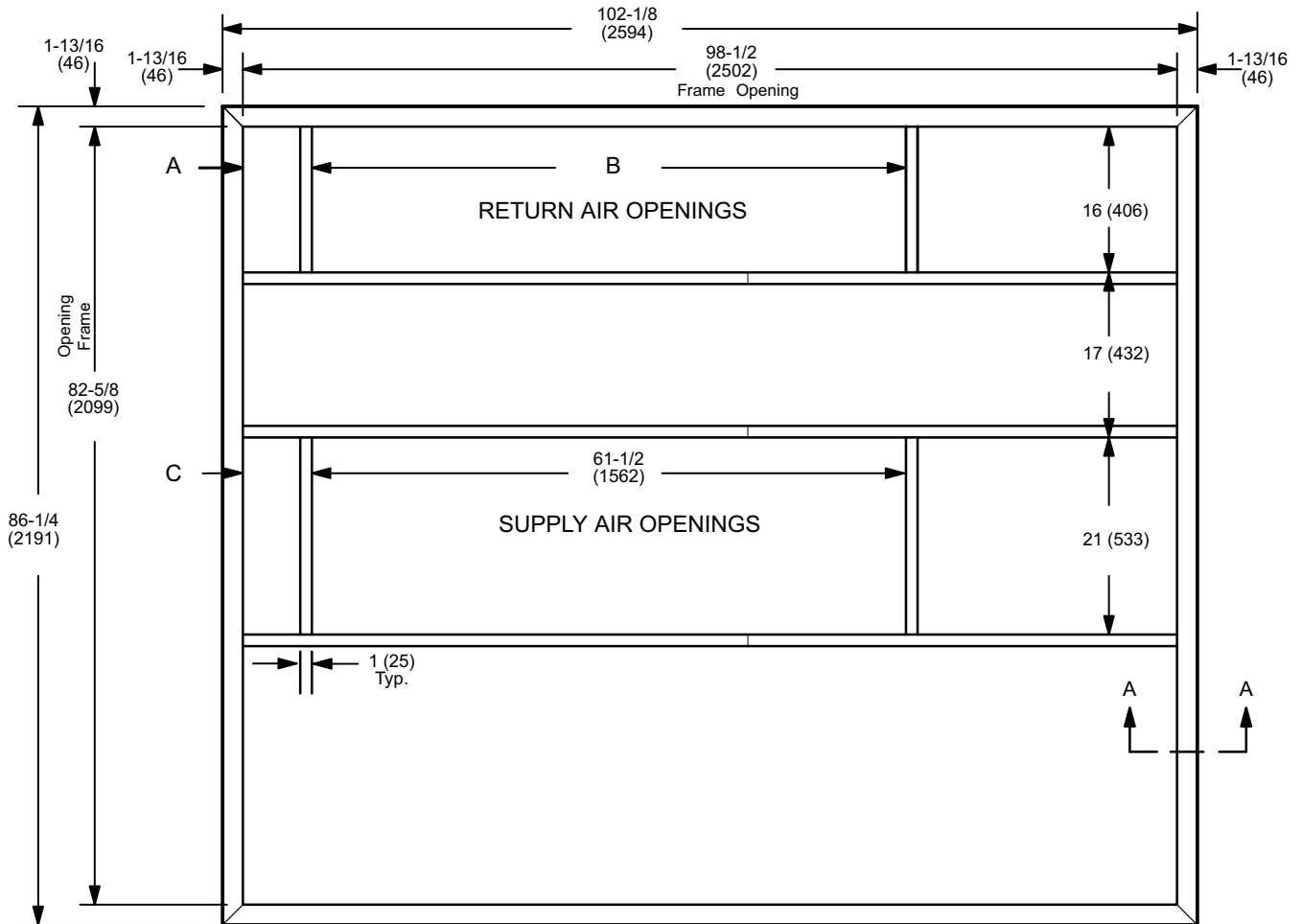
**FIGURE 1**



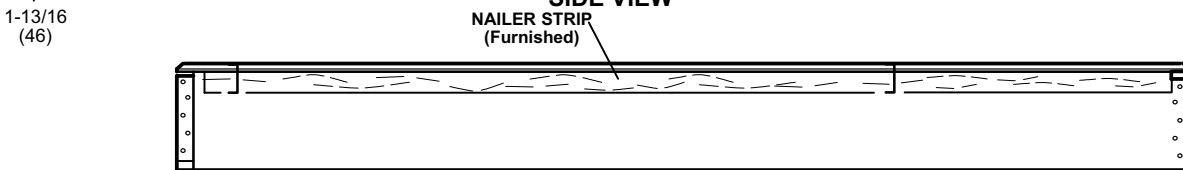
Dimension	180, 240, 300S	242H, 300H, 360H
A	8-1/4 (210)	1-3/4 (46)
B	61-1/2 (1562)	79-1/2 (2019)
C	8-1/4" (210)	13-1/4 (357)

**LARMF18/36-14 ROOF MOUNTING FRAME FOR LGH/LCH 156, 180, 210, 240, 242H, 300, 360H UNITS**

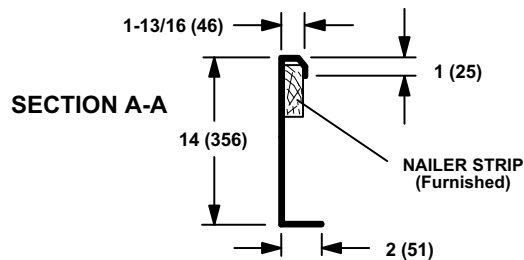
**TOP VIEW**



**SIDE VIEW**



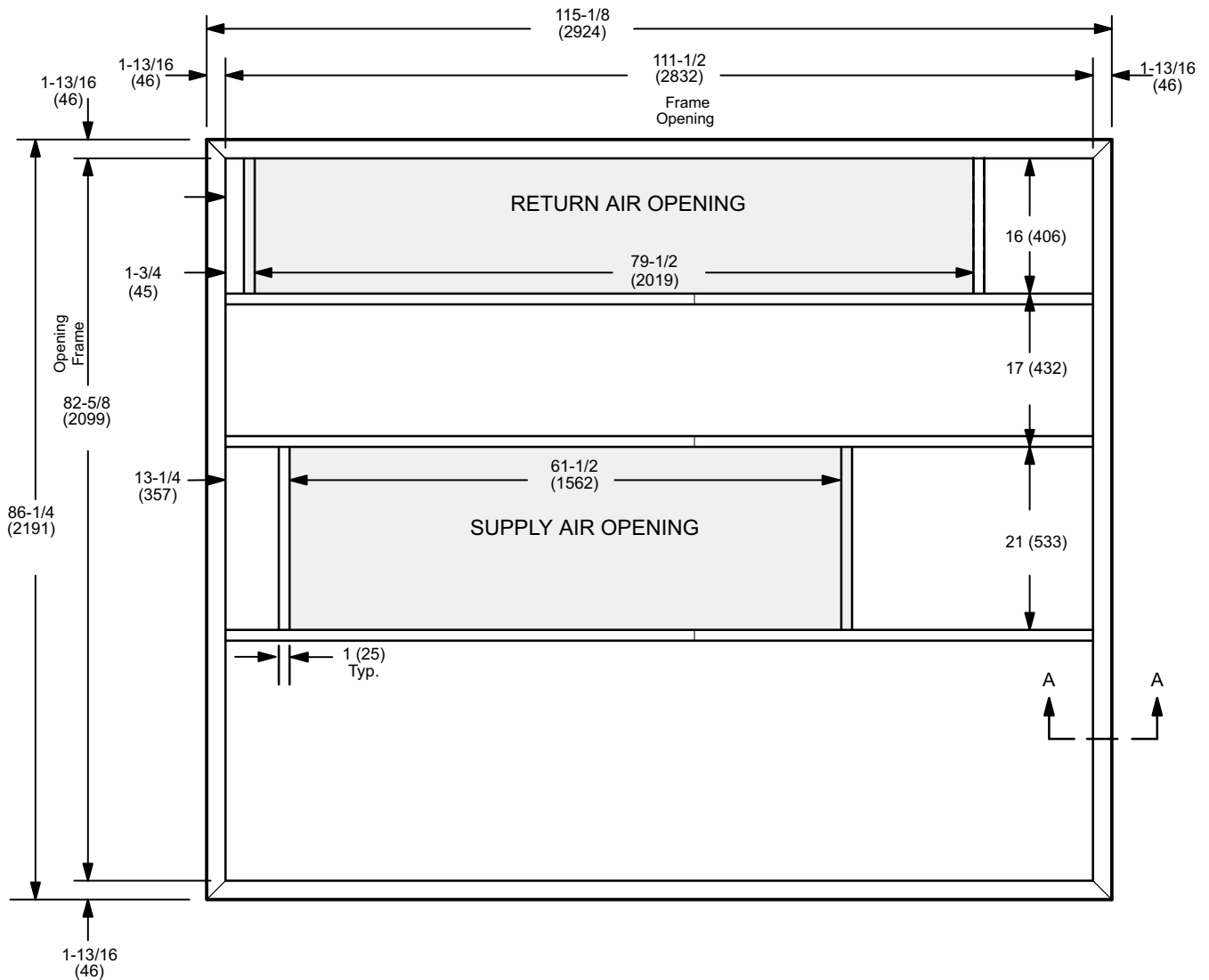
NOTE — Roof deck may be omitted within confines of frame.



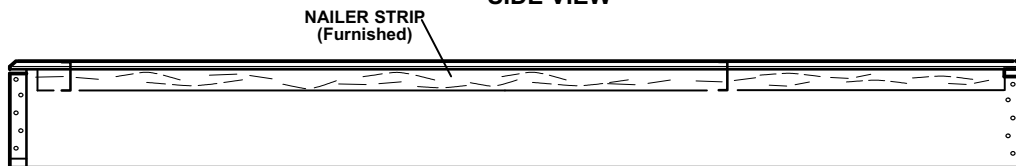
**FIGURE 2**

**DIMENSIONS - inches (mm)**  
**S6CURB10121 ROOF MOUNTING FRAME**  
**FOR SG/SC 288 & LGH/LCH 242H, 300H & 360H UNITS**

**TOP VIEW**

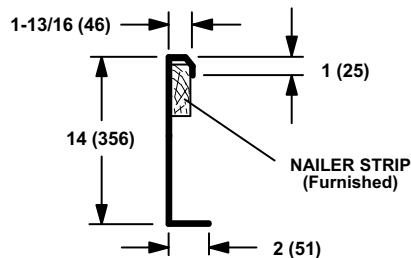


**SIDE VIEW**



NOTE — Roof deck may be omitted within confines of frame.

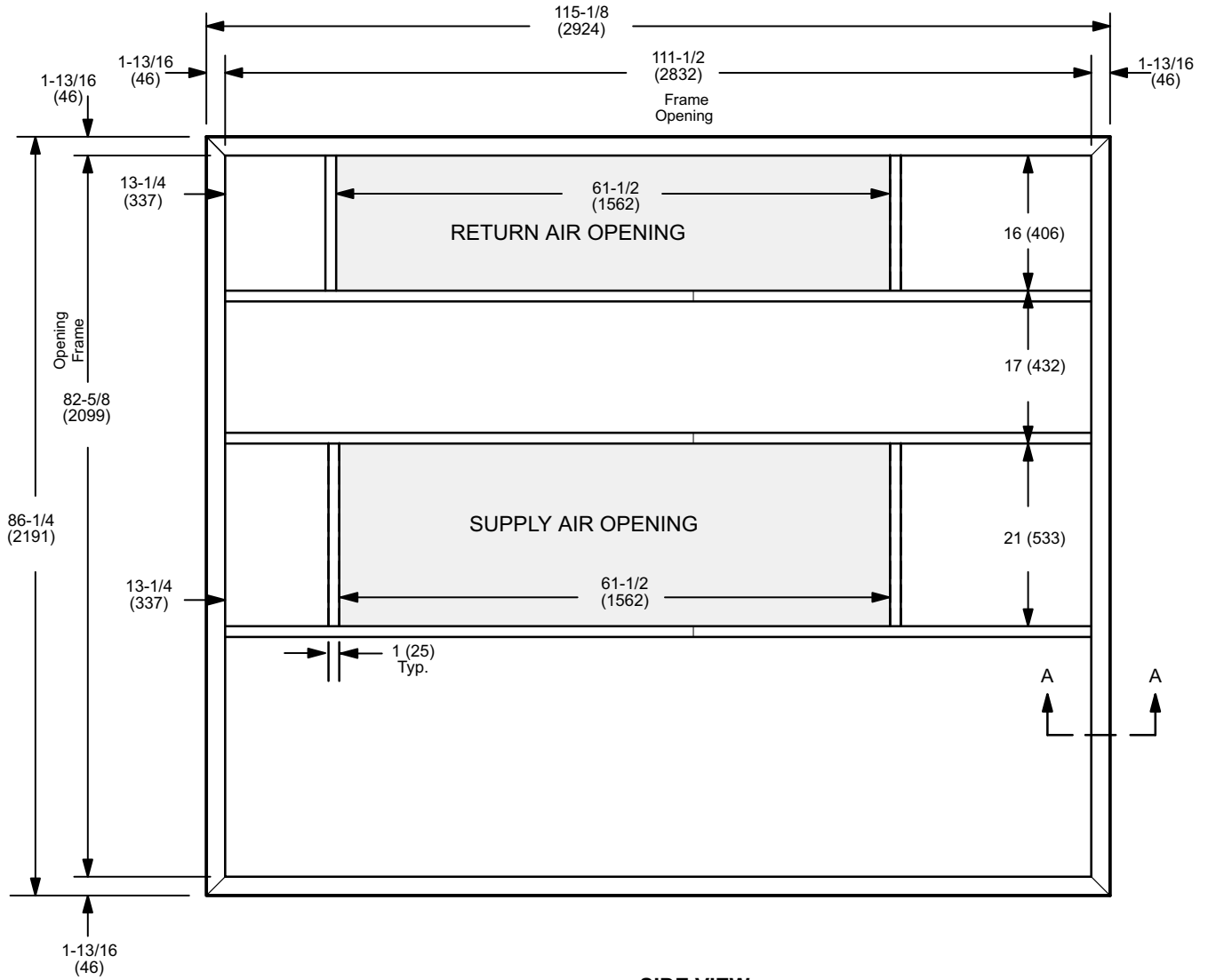
**SECTION A-A**



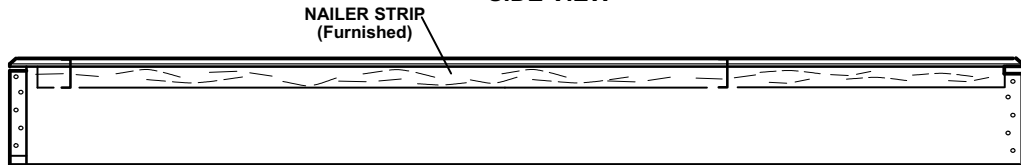
**FIGURE 3**

**S6CURB10121 ROOF MOUNTING FRAME DIMENSIONS - inches (mm)  
FOR SG/SC 240 & SW/SR 240 UNITS**

**TOP VIEW**

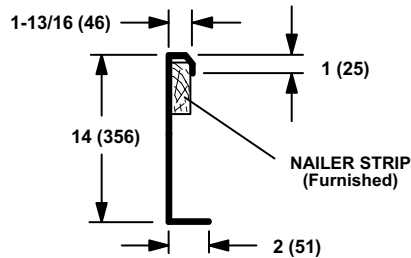


**SIDE VIEW**



NOTE — Roof deck may be omitted within confines of frame.

**SECTION A-A**



**FIGURE 4**

1 Unit Clearance	A		B		C		D		Top Clearance
	in.	mm	in.	mm	in.	mm	in.	mm	
<b>Service Clearance</b>	72	1829	36	914	60	1524	96	2438	<b>Unobstructed</b>
<b>Clearance to Combustibles</b>	36	914	1	25	1	25	1	25	
<b>Minimum Operation Clearance</b>	36	914	36	914	36	914	36	914	

NOTE - Entire perimeter of unit base requires support when elevated above the mounting surface. 1-**Service Clearance** - Required for removal of serviceable parts. **Clearance to Combustibles** - Required clearance to combustible material. **Minimum Operation Clearance** - Required clearance for proper unit operation.

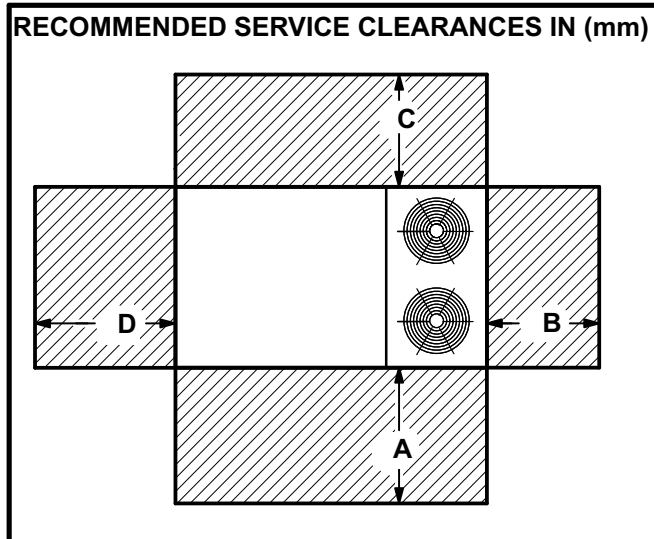


FIGURE 5

### Frame Assembly

The assembled frame is illustrated in figure 6.

- 1- Secure the front, back, and two end pieces together at corners using sheet metal screws provided.
- 2- *14" Frames Only* - Each center support consists of two pieces; one end with a flange and one end without a flange. Slide the smaller unflanged end inside the larger unflanged end. Secure ends together with four screws. Fasten center support to frame with sheet metal screws. Repeat for two remaining center supports.
- 3- Secure two supply and two return air cross supports using sheet metal screws.

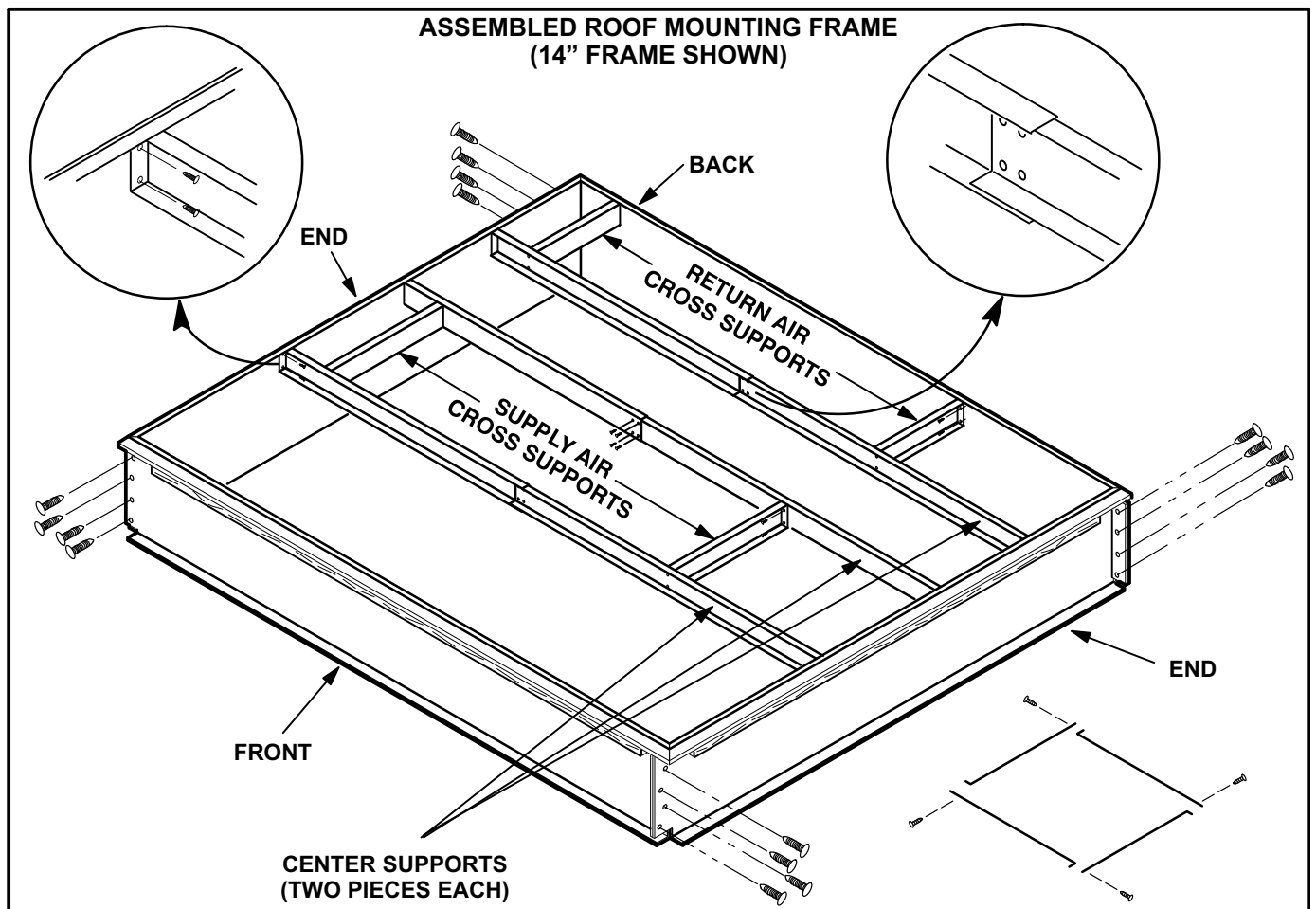


FIGURE 6

## Securing Frame

To assure proper mating with units, it is mandatory the mounting frame be squared to roof structure as follows:

- 1- With frame situated level in desired location on roof trusses, tack weld (1) corner of frame.
- 2- Measure frame diagonally from corner to corner as shown in figure 7. These dimensions must be equal for frame to be square.

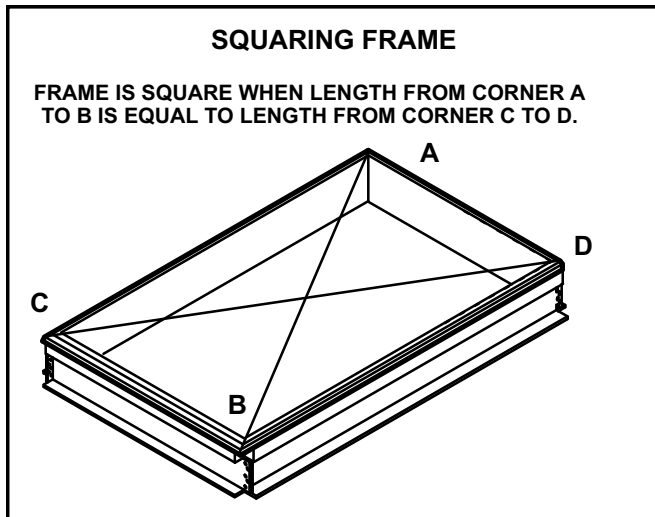


FIGURE 7

- 3- It is extremely important to sight frame from all corners to make certain frame is not twisted across top side. Shim frame under any low sides. Maximum slope tolerance is 1/16" per linear foot in any direction.

*Exception:*

*1/16" per linear foot to 3/8" per linear foot roof pitch (5mm per linear meter to 30mm per linear meter)—*

*Roof curb can be installed level to the roof pitch only if the unit outdoor air intake is oriented toward the higher side of the roof pitch.*

- 4- After frame has been squared, straightened and shimmed, weld or attach frame securely to roof deck.

*NOTE - Securely fasten roof frame to roof per local codes.*

## Curbing and Flashing

- 1- Outside of frame should be insulated with rigid type insulation, preferably 2" (51 mm) thick. Do not use combustible material for filling around frame.
- 2- Counter-flash and seal around frame as shown in figure 8.

*IMPORTANT-If a poured roof is used, such as concrete, be sure inside of mounting frame is adequately braced to ensure a square and level frame.*

## Miscellaneous

- 1--Where pipes and electrical conduit extend through roof, flashing must conform to National Roofing Contractors Association (NRCA) Standards.
- 2--Roof walkways should be provided around equipment to facilitate servicing.

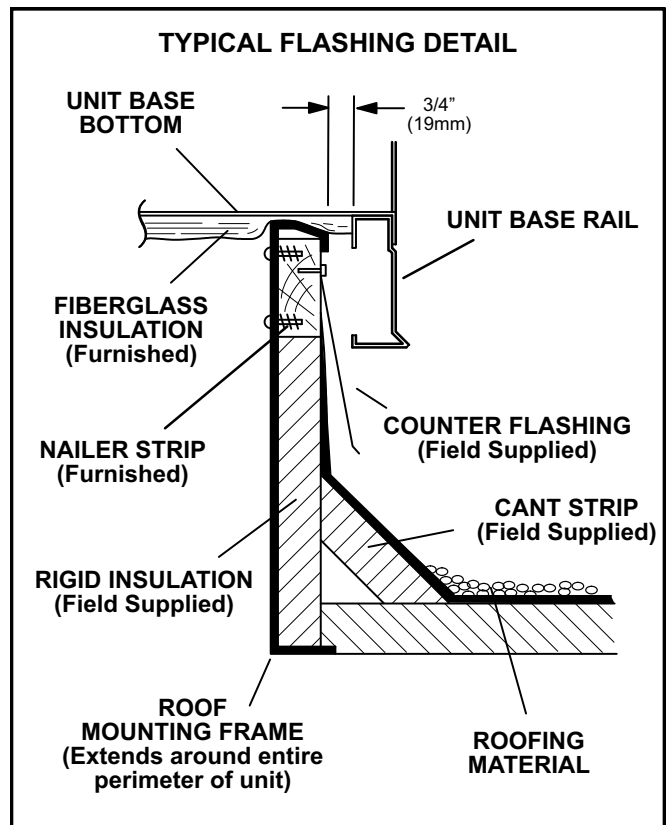


FIGURE 8

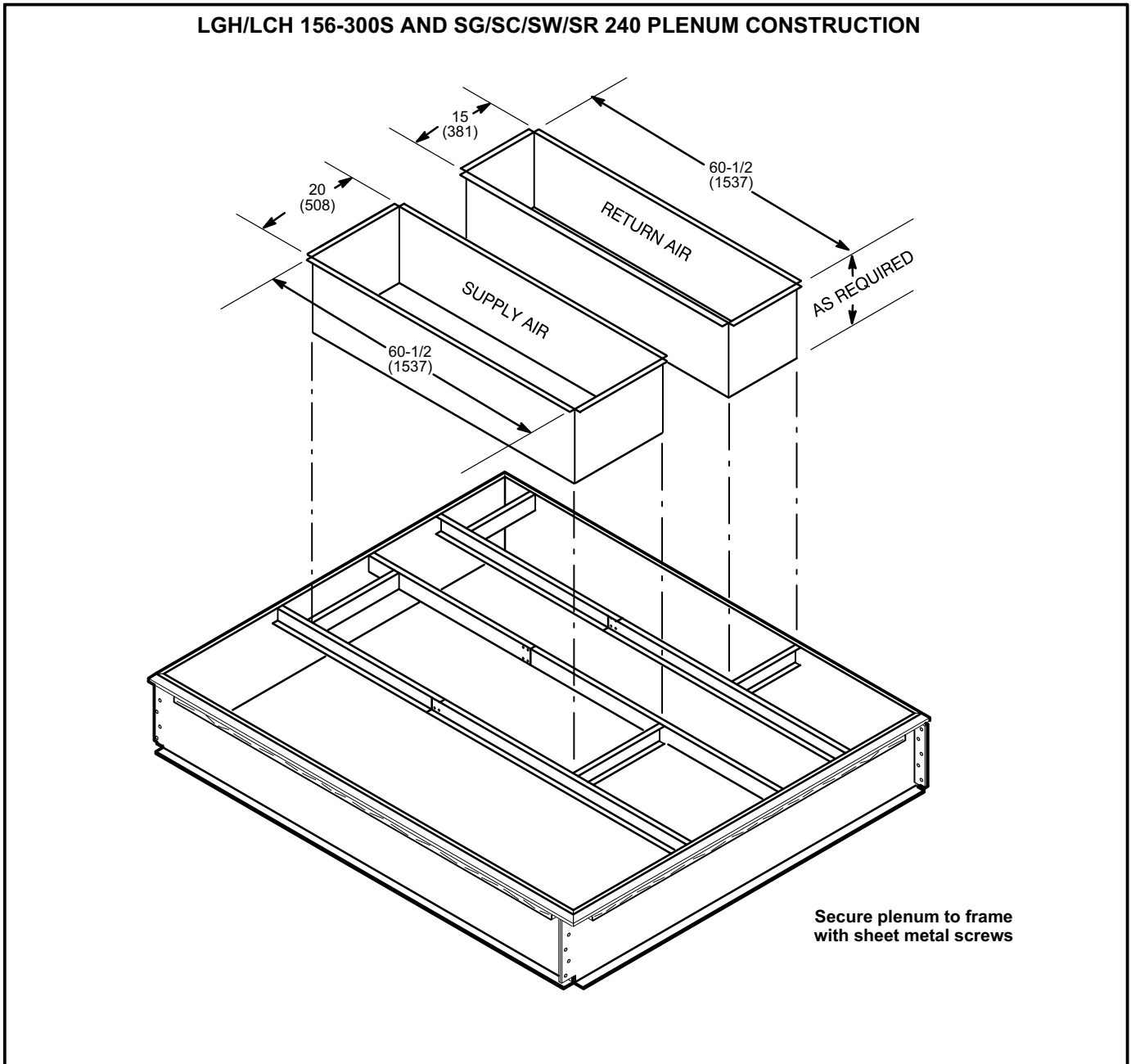
## Supply and Return Plenum

*IMPORTANT-Plenum system must be installed before unit is set on mounting frame.*

Plenums must be constructed of galvanized steel with coated fiberglass insulation applied to the inside. It is

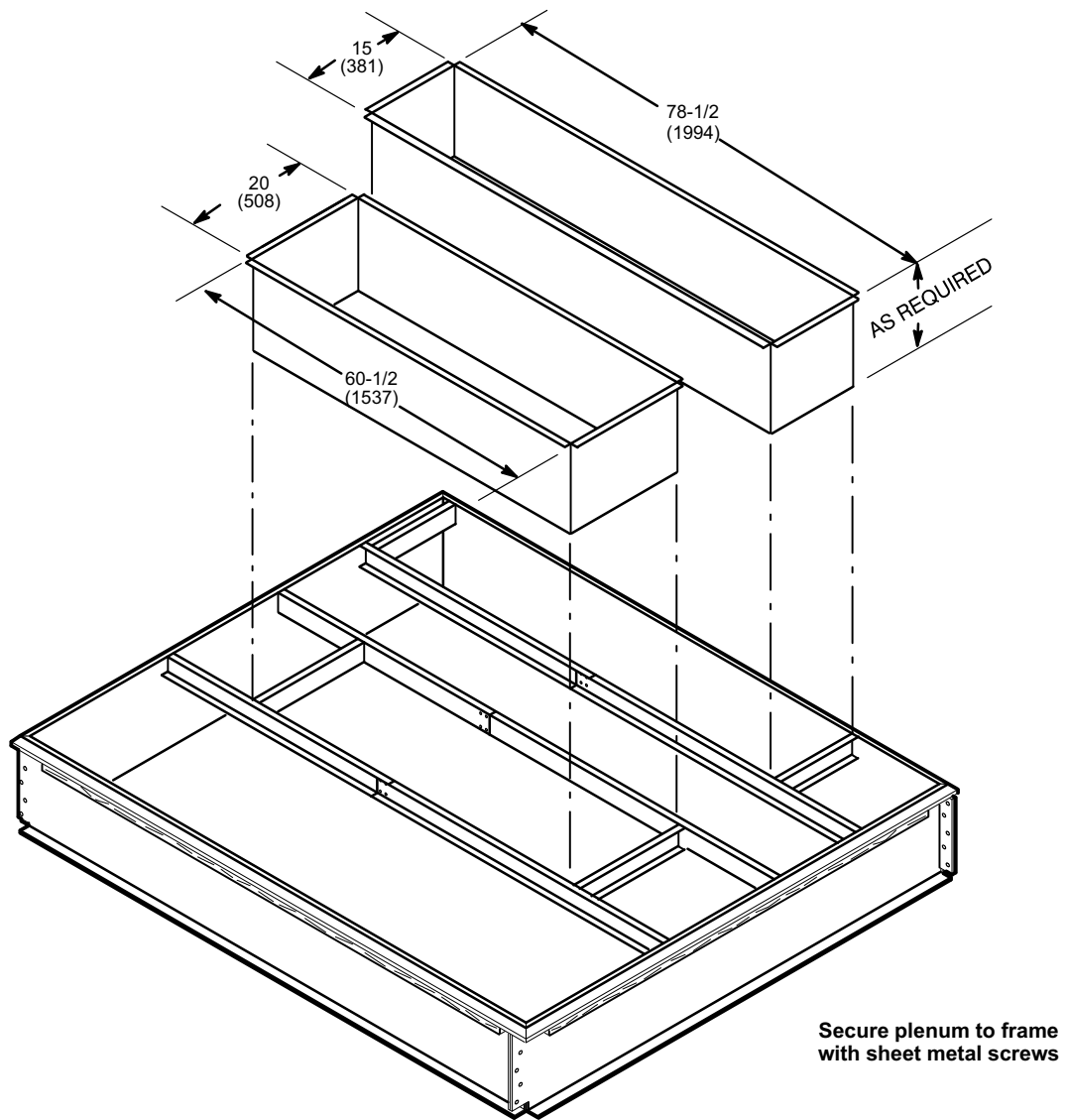
recommended that 1/2" (13 mm) thick, 3 lb./ft<sup>3</sup> (48 kg/m<sup>3</sup>) density fiberglass insulation be used.

However, if 1-1/2 lb./ft<sup>3</sup> (24 kg/m<sup>3</sup>) density insulation is used, it should be secured with mechanical fasteners. Install plenums as shown in figure 9 and 10.



**FIGURE 9**

**LGH/LCH242H, 300H, 360H AND SG/SC 288 PLENUM CONSTRUCTION**



**FIGURE 10**