SUPPLEMENTAL INSTRUCTIONS

TCURBF, TCURBT, TFCF, TFCT T-FLEX Curbs

CONTENTS

Overvie	ew		. 1
		oplication Guide	
		······································	
New	Instal	llations	. 7
		stallations	
Figure	es		
Figure	1	TCURBF2430A	. 4
Figure	2	TCURBF3642A	. 4
Figure	3	TCURBF4860A	. 4
Figure	4	TCURBT2430A	. 4
Figure	5	TCURBT3642A	. 5
Figure	6	TCURBT4860A	. 5
Figure	7	TFCF-32B	. 6
Figure	8	TFCF-53B	. 6
Figure	9	TFCT-32B	. 6
Figure	10	TFCT-53B	
Figure	11	Wall Mounting Instructions	. 9
Figure	12	Wall Mounting Instructions	
Figure	13	Electric Heat Clearance	10
Figure	14	TCURBF2430A Supply and	
		Return Openings	11
Figure	15	TCURBT2430A Supply and	
		Return Openings	12
Figure	16	TCURBT3642A and TCURBT4860A	
		Supply and Return Openings	13
Figure	17	TCURBF3642A and TCURBF4860A	
		Supply and Return Openings	14
Figure		TFCF-32B Supply and Return Openings.	
Figure		TFCT-32B Supply and Return Openings	
Figure		TFCF-53B Supply and Return Openings.	
Figure		TFCT-53B Supply and Return Openings	
Figure		Fastening Unit to Curb	19
Figure		Sealing with Caulk	
Figure	24	Sealing with Caulk (Top Outlet Curb) 2	21

Overview

Wall curb products are an optional accessory that can be installed between the Bard wall mount product and an exterior wall surface to replace equipment on an existing building or provide the lowest indoor sound level possible for new construction projects. The wall curb designs included in this manual are designed to provide an easy-to-use method of reducing sound levels inside a room being conditioned by the wall mount and to provide unit upgrade options with minimal wall modifications. Bard sound and isolation curbs are designed, tested and patented to provide a unique solution with the best possible sound reduction results.

Curb Construction

Curb models are available in Beige (-X), White (-1), Buckeye Gray (-4), Desert Brown (-5) and Dark Bronze (-8). Curb model numbers will be followed by the color code when ordering. Painted cabinet construction is comprised of 16 gauge or 20 gauge zinc coated steel. Parts are cleaned, rinsed, sealed and dried before a polyurethane primer is applied. The cabinet coating is completed with a baked-on textured enamel. The resulting finish is designed to withstand 1000 hours of salt spray tests per ASTM B117-03. All curb models in this manual ship pre-assembled on a wood skid.

Curb design uses an inner frame that attaches to the building wall and an outer frame that attaches to the new wall-mount unit. Rubber isolators separate the inner and outer frames. This patented design provides advanced vibration isolation between the unit and wall surface and reduces the transfer of vibration from the compressor, indoor fan and outdoor fan into the indoor area. Sound from vibration sources is commonly known as a "drumming effect." Commercial grade rubber gaskets are used to prevent air leakage between the inner and outer curb frame.



Bard Manufacturing Company, Inc. Bryan, Ohio 43506 www.bardhyac.com Manual: 7960-689I Supersedes: 7960-689H Date: 6-16-21 The curb is insulated with an anti-microbial flame/smoke resistant non-fiberglass cotton material. Back panels and middle partitions are used in all curb designs that seal and separate the return and supply air paths. Curb designs include the ability to remove the back panels and adjust the return opening location (see chart and curb figures for alternate back return opening locations). This provides a means of offsetting the return opening of the unit and the return air path in the room. By using an offset air path, sound levels can be reduced by minimizing the direct path of sound travelling into the room through the return air grille. If offsetting the return air path is not possible due to existing wall construction, the back panels can be adjusted to match existing wall opening locations (see chart and curb figures for alternate back return opening locations).

Two inch duct flanges are integrated into the curb back for duct installation. The curb is suitable for applications requiring a ducted supply and return. Refer to unit installation instructions for acceptable total unit supply and return static information.

Fasteners required to attach the Bard wall-mount unit to the curb are supplied from the factory. These include carriage bolts and Keps nuts that will be used to install the unit to the curb. The curb frame will have expanded brass cage nuts on the front curb surface for unit installation. A foam seal is provided between the unit flanges and curb front surface.

Fasteners required to attach the curb to the wall are field supplied and are specific to wall construction. Installation and seismic requirements must follow all national, state and local codes. Review the wall mount installation instructions and all other documentation provided with the wall mount unit for further guidelines before installing this product.

Curb Models

The TCURBF model series provides a curb solution that can be used to reduce sound and vibration with normal unit applications. The back panels can be configured to either reduce (6.125") or use the same (17.93" or 30") supply and return spacing as the new unit being installed. When used with the reduced supply and return spacing, the return air path is offset for increased sound reduction.

The TCURBT model series provides a curb solution that can be used to reduce sound and vibration where the supply air path extends into an overhang or soffit. Back configuration is not normally necessary as the return air path is offset for sound reduction while still keeping the new unit supply and return opening spacing. The upper portion of the TCURBT ships disassembled on the skid alongside the curb to meet shipping height requirements.

The TFCF model series provides a curb solution that can be used to reduce sound and vibration with normal unit applications. Back configuration is not normally necessary as the return air path is offset and return and

supply opening spacing is configured to match existing equipment dimensions (see chart and figure of curb).

The TFCT model series provides a curb solution that can be used to reduce sound and vibration where the supply air path extends into an overhang or soffit. Back configuration is not normally necessary as the return air path is offset and return and supply opening spacing is configured to match existing equipment dimensions (see chart and figure of curb). The upper portion of the TCURBT ships disassembled on the skid alongside the curb on some models to meet shipping height requirements.

Curb Use with the CH Series Wall Mount

The TCURB and TFC curb models are designed to work with the CH product and include many features that are exclusively used to enhance CH ventilation options. An exhaust air path is located in the lower section of the curb that allows room air to be exhausted away from the fresh air entering the structure. A coarse bug screen filter is located on the bottom of the curb that slides out the left or right side. Be sure to review the bug screen rack installation at the bottom of the curb and configure it for needed screen access for cleaning. All CH unit economizers and all commercial room ventilators (CRV) except for the C24H and C30H models (CHCRV-3) use the curb exhaust vent path for ventilation. All CH unit energy recovery ventilators (ERV) do not use the curb exhaust vent path for ventilation. Be sure to review and follow all installation instructions provided with the CH wall mount product.

Curb Use with the TS Series Wall Mount

The TCURB and TFC curb models are designed to work with the TS product and will use the sound and vibration reduction properties of the curb. The exhaust air path will not be utilized when using the TS unit with the wall curb. The wall mount includes all needed requirements to provide ventilation to the indoor area. Be sure to review and follow all installation instructions provided with the TS wall mount product.

Curb Use with the WG Series Wall Mount

The TCURBF curb models are designed to work with the WG gas electric wall mount product and will use the sound and vibration reduction properties of the curb. The exhaust air path will not be utilized when using the WG unit with the wall curb. The WG wall mount includes all needed requirements to provide ventilation to the indoor area. A top adapter panel is required to make the top of the TCURB align with the top of the WG wall mount. The W24G, W30G and W36G gas electric wall mounts will use the TCURBF2430 curb with a WG9CA3 top adapter panel. The W42G, W48G, W60G, WG3S, WG4S, and WG5S gas electric wall mounts will use the TCURBF4860 curb with a WG9CA5 top adapter panel. Be sure to review and follow all installation instructions provided with the WG gas electric wall mount product.

Wall Curb Application Guide

Use the following charts to review the following: New unit compatibility when using the curb, unit and curb supply and return spacing, supply and return opening sizes for the wall, and supply and return opening sizes for the new unit.

TCURBF Sound and Vibration Isolation Curbs – Standard Wall Supply Opening Location

			New Unit Connections			Curb Connections			
Fig.	Curb Model	Unit Model	Supply	Return	Supply and Return	Supply	Return	Supply and Return	Application
1	TCURBF2430A	C24H C30H, T30S W24G - W36G	7.88 x 27.88	13.88 x 27.88	17.93	7.88 x 27.88	13.88 x 27.88	6.125 or 17.93	Used to offset the return opening for new construction or replace W18 through W36 units. WG products require WG4CA3 top adapter panel.
2	TCURBF3642A	C36H - C42H T36S- T42S	9.88 x 29.88	15.88 x 29.88	30.00	9.88 x 29.88	15.88 x 29.88	6.125 or 30.00	Used to offset the return opening for new construction or replace CH3S1, W42 through W72 units.
3	TCURBF4860A	C48H - C60H T48S - T60S W42G - W60G WGS	9.88 x 29.88	15.88 x 29.88	30.00	9.88 x 29.88	15.88 x 29.88	6.125 or 30.00	Used to offset the return opening for new construction or replace CH4S1, CH5S1, W42 through W72 units. WG products require WG9CA5 top adapter panel.

TCURBT Sound and Vibration Isolation Curbs – Soffit Supply Opening Location

			New Unit Connections			Curb Connections			
Fig.	Curb Model	Unit Model	Supply	Return	Supply and Return	Supply	Return	Supply and Return	Application
4	TCURBT2430A	C24H C30H, T30S	7.88 x 27.88	13.88 x 27.88	17.93	7.88 x 27.88	13.88 x 27.88	17.93	Used to replace W18 thru W36 or other units in a soffit/new construction with a higher supply opening.
5	TCURBT3642A	C36H - C42H T36S - T42S	9.88 x 29.88	15.88 x 29.88	30.00	9.88 x 29.88	15.88 x 29.88	30.00	Used to replace W42 thru W72 or other units in a soffit/new construction with a higher supply opening.
6	TCURBT4860A	C48H - C60H T48S - T60S	9.88 x 29.88	15.88 x 29.88	30.00	9.88 x 29.88	15.88 x 29.88	30.00	Used to replace W42 thru W72 or other units in a soffit/new construction with a higher supply opening.

TFCT Sound and Vibration Isolation Curbs – Unit Size Upgrade with Soffit Supply Opening Location

				New Unit Connections			b Connec	tions	
Fig.	Curb Model	Unit Model	Supply	Return	Supply and Return	Supply	Return	Supply and Return	Application
7	TFCT-32B	C24H C30H, T30S	7.88 x 27.88	13.88 x 27.88	17.93	7.88 x 19.88	11.88 x 19.88	20.56	Used to replace W18 thru W24 or same size units in a soffit with CH or TS products that use a larger cabinet size.
8	TFCT-53B	C36H - C42H T36S - T42S	9.88 x 29.88	15.88 x 29.88	30.00	7.88 x 27.88	13.88 x 27.88		Used to replace W30 thru W36 or other same size units in a soffit with CH or TS products that use a larger cabinet size.

TFCF Sound and Vibration Isolation Curbs - Unit Size Upgrade with Standard Wall Supply Opening Location

		New Unit Connections			Curb Connections				
Fig.	Curb Model	Unit Model	Supply	Return	Supply and Return	Supply	Return	Supply and Return	Application
7	TFCF-32B	C24H C30H, T30S	7.88 x 27.88	13.88 x 27.88	17.93	7.88 x 19.88	11.88 x 19.88	20.56	Used to replace W18 thru W24 or same size units with CH or TS products that use a larger cabinet size.
8	TFCF-53B	C36H - C42H T36S- T42S	9.88 x 29.88	15.88 x 29.88	30.00	7.88 x 27.88	13.88 x 27.88	17.93	Used to replace W30 thru W36 or other same size units with CH or TS products that use a larger cabinet size.

FIGURE 1 TCURBF2430A

26 7/16 27 7 8 40 5 6 1 7 17 15/16 13 7 8 17 15/16 13 15/16 13 7 8 17 15/16 13 15/16 13 15/16 13 15/16 13 15/16 13 15/16 13 15/16 13 15/16 13 15/16 13 15/16 13 15/16 13 15/16 13 15/16 13 15/16 13 15/16 13 15/16 13/

FIGURE 2 TCURBF3642A

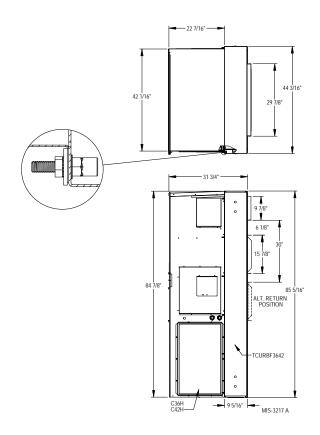


FIGURE 3 TCURBF4860A

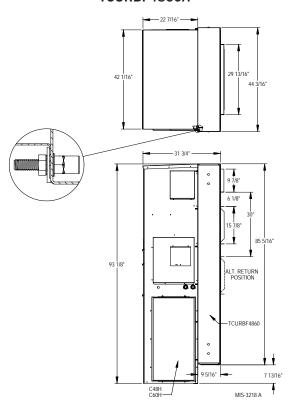


FIGURE 4 TCURBT2430A

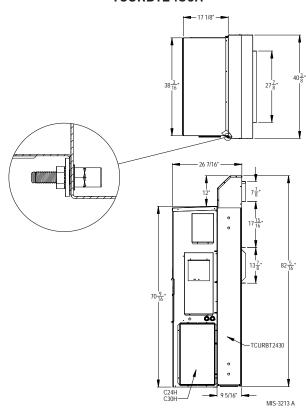


FIGURE 5 TCURBT3642A

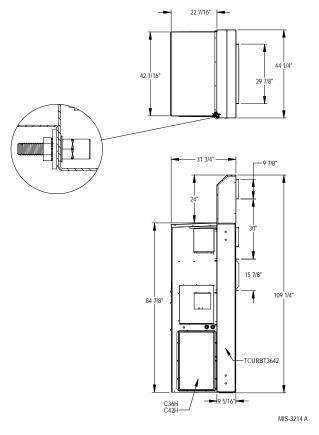
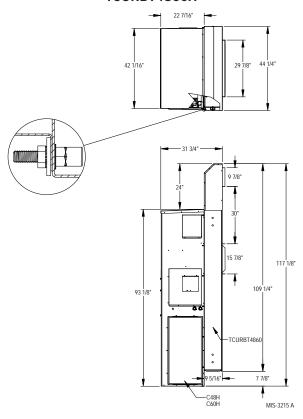
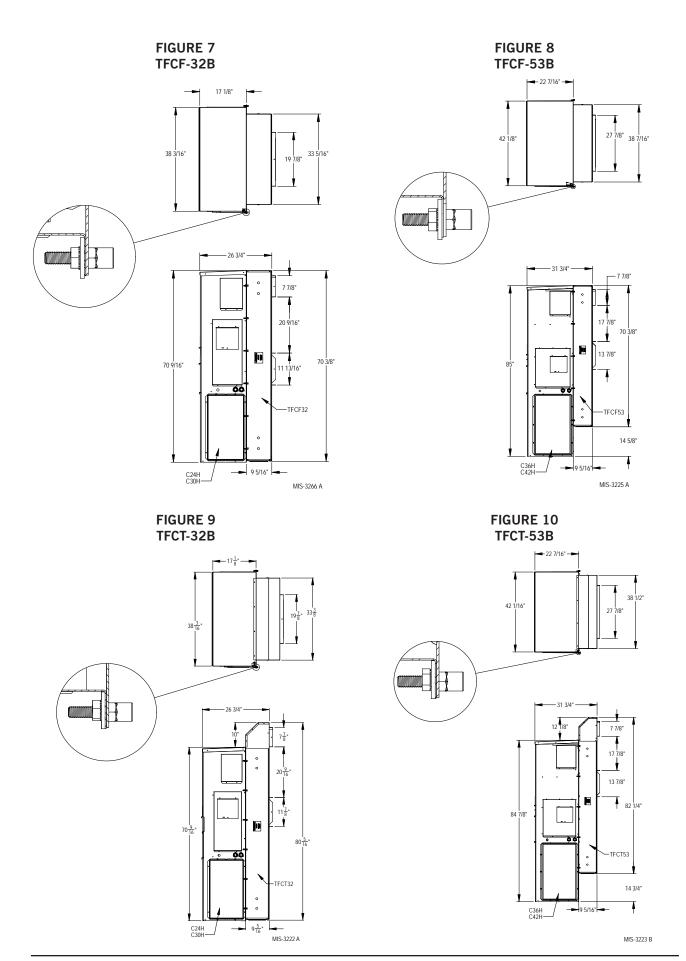


FIGURE 6 TCURBT4860A





Installation

Field-supplied tools needed for installation:

- Appropriate personal protection equipment, including gloves and safety glasses
- 5/16" nut driver
- 1/2" (13mm) wrench or deep well socket
- 3/4" (19mm) wrench or socket
- Safe method of lifting equipment
- Outdoor-rated silicone caulk

TCURBF****-*, TCURFT****-* New Installations

- 1. Frame the wall in accordance with these installation instructions. See Figures 11-17.
- 2. Remove the packaging from the curb but leave attached to the skid for now.
- 3a. TCURB*2430A models: Measure the distance between the SA (supply air) and RA (return air) opening in the wall and verify the curb has the correct back orientation for the wall. The curbs come out of the box set up for nominal 6" spacing between SA and RA. To convert to nominal 18" spacing, remove the RA panel from the back, rotate the RA panel 180° and place into position covering the lower open area. There should now be nominal 18" spacing between the SA and RA openings. Once verified, replace all screws securing the RA panel into place.
- 3b. TCURB*3642A and TCURB*4860A models:

 Measure the distance between the SA (supply air) and RA (return air) opening in the wall and verify the curb has the correct back orientation for the wall. The curbs come out of the box set up for nominal 6" spacing between SA and RA. To convert to nominal 30" spacing, remove the solid panel and RA panels from the back, move the solid panel up and attach to the bottom of the SA panel. Rotate the RA panel 180° and place into position covering lower open area. There should now be nominal 30" spacing between the SA and RA openings. Once verified, replace all screws securing the RA panel into place.
- 4. Remove curb from skid and lay flat on the back on the ground or on saw horses.
- 5. Attach the bug screen frame to the bottom of the curb with screws provided. Insert the bug screen.
- 6. Remove the four (4) bolts and lock washers holding the outer frame to the inner frame.
- 7. On top outlet versions, leave the upper support angle on the outer frame at this time.
- 8. Slide the outer frame off of the inner frame and set aside.
- 9. On the TCURBT3642A-* and TCURBT4860A-X, mount the top box to the inner frame using the

- screws provided. The top box is shipped attached on all other curbs.
- 10. On the inner frame, locate the TL side indicating Top Left. On the rear of the mounting flange, apply a liberal amount of silicone caulk to weather seal the inner curb to the structure.
- 11. Mount the inner frame to the wall using lag bolts. Be sure to center the supply and return flanges of the back in the wall openings. Verify the curb is square.
- 12. Remove the lower partition blank-off plate if the unit has an economizer installed in it. On C24H and C30H units, also remove the lower partition blank-off plate if the unit has a CHCRV-3 installed in it.
- 13. Slide the outer frame back over the inner frame and reattach using the four (4) bolts and lock washers removed in Step 6. The bug screen should be at the bottom of the curb. The top outlet sides must slide under the top outlet box sides.
 - **NOTE:** The outside curb will need to be compressed slightly to get the bolts started. Clamps or pliers may be needed to compress the rear seal to align the bolt holes. It is necessary for the seal to be under compression so when the wall mount is installed, adequate weather sealing is maintained.
- 14. Remove the upper support angle now if a top outlet curb.
- 15. Verify the curb is square.
- 16. Raise the unit to the curb with a suitable lift and engage the top of the unit to the curb first by slightly tipping the unit toward the curb. On top outlet curbs, ensure the unit is underneath the lip on the top outlet box. Caulk may be applied under the lip of the top outlet box if desired.
- 17. Engage nuts and washers (supplied) loosely to the top two (2) bolts in the curb to help keep the top of the unit in position.
- 18. Pivot the unit down to engage the remainder of the bolts and fasten securely to the curb with nuts and washers (supplied). See Figure 22.
- 19. Apply a liberal amount of caulk across the top seam of the curb where it meets the unit or top outlet box. Also apply caulk where the curb or top box meet the wall (see Figures 23 and 24).
- 20. Connect power wires and thermostat wires to the unit. Use flexible conduit to maintain vibration isolation. Use of rigid conduit is not recommended and could cancel the benefits of the curb.
- 21. Connect ductwork per standard practices.

TFCT-32B-*, TFCF-32B-*, TFCT-53B-*, TFCF-53B-* Retrofit installations

Adding to Existing Installation

- 1. Disconnect the electrical entrance and thermostat wires from the old unit.
- Disconnect the duct work as required from the old unit.
- 3. Supporting the unit, remove the mechanical fasteners retaining the wall mount unit to the structure, then lower the unit and move it off to the side.
- Remove and discard bottom mounting bracket for wall mount.
- Remove the packaging from the curb, but leave attached to the skid for now.
- Verify that the wall is structurally sound. Make sure the new curb mounting holes will allow lag screws or other fastening devices to be inserted into supporting wall structure.
- 7. Measure the distance between the supply and return opening in the wall and verify the curb has the correct back orientation for the wall. If not, remove the inner back, turn 180° and reattach (see Figure 22). Verify the correct dimensions are correct.
- 8. Remove curb from skid and lay flat on the back on the ground or on saw horses.
- 9. Attach the bug screen frame to the bottom of the curb with screws provided. Insert the bug screen.
- 10. On top outlet versions, leave the upper support angle on the outer frame at this time.
- 11. On the curb, locate the TL side indicating Top Left. On the rear of the wall mounting flange, apply a liberal amount of silicone caulk to weather seal the inner curb to the wall structure.
- 12. Mount the curb to the wall using lag bolts. The rubber plugs installed in the outer curb side flanges can be removed for lag hole access. Use a long drill driver extension (12") to reach lag holes. Be sure to center the supply and return flanges of the back in the wall openings. Verify the curb is square.
- 13. Remove the lower partition blank-off plate if the unit has an economizer installed in it. On C24H and C30H units, also remove the lower partition blank-off plate if the unit has a CHCRV-3 installed in it.
- 14. Remove the upper support angle now if a top outlet curb.
- 15. Verify the curb is square.
- 16. Raise the unit to the curb with a suitable lift and engage the top of the unit to the curb first by slightly tipping the unit toward the curb. On top outlet curbs, ensure the unit is underneath the lip on the top outlet box. Caulk may be applied under the lip of the top outlet box if desired.

- 17. Engage nuts and washers (supplied) loosely to the top two (2) bolts in the curb to help keep the top of the unit in position.
- 18. Pivot the unit down to engage the remainder of the bolts and fasten securely to the curb with nuts and washers (supplied). See Figure 22.
- 19. Apply a liberal amount of caulk across the top seam of the curb where it meets the unit or top outlet box. Also apply caulk where the curb or top box meet the wall (see Figures 23 and 24).
- 20. Connect power wires and thermostat wires to the units. Use flexible conduit to maintain vibration isolation. Use of rigid conduit is not recommended and could cancel the benefits of the curb.
- 21. Connect ductwork per standard practices.

FIGURE 11 Wall Mounting Instructions

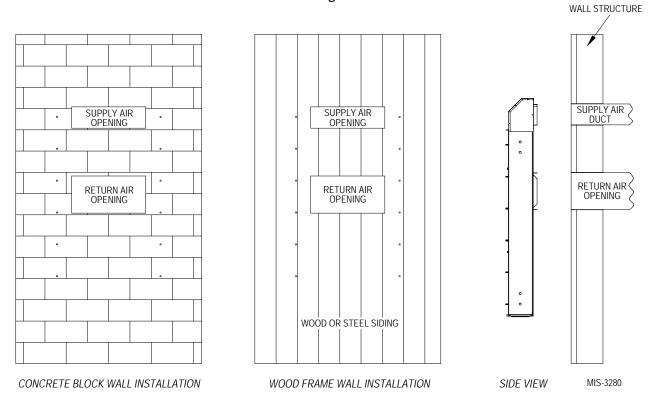


FIGURE 12
Wall Mounting Instructions

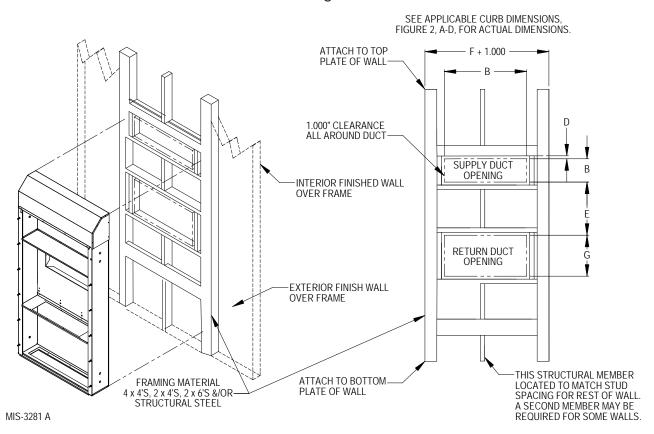
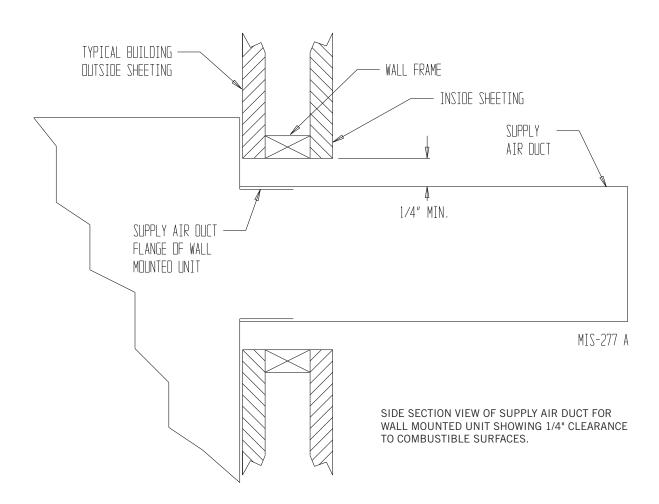


FIGURE 13 Electric Heat Clearance





WARNING

A *minimum* of 1/4" clearance must be maintained between the supply air duct and combustible materials. This is required for the first 3' of ducting.

It is important to ensure that the 1/4" minimum spacing is maintained at all points.

Failure to do this could result in overheating the combustible material and may result in a fire causing damage, injury or death.

MIS-3276 A IT IS RECOMMENDED THAT A BEAD OF SILICONE CAULKING BE PLACED BEHIND THE SIDE MOUNTING FLANGES AND UNDER TOP FLASHING AT TIME OF INSTALLATION. —1/4" CLEARANCE ON ALL FOUR SIDES OF SUPPLY AIR DUCT IS REQUIRED FROM COMBUSTABLE MATERIALS WALL STRUCTURE NOTES: RETURN AIR OPENING **FOAM AIR SEAL** SUPPLY AIR DUCT Right Side View SEAL WITH BEAD OF CAULKING ALONG ENTIRE LENGTH OF TOP. 0 0 0 Supply and Return Openings TCURBF2430A **FIGURE 14** ŋ 14 14 1/8 1/8 39 39 5 3/4 -WALL 9 4 7/16 3 11/16 Wall Opening and Hole Location View 4 5/8 5 3/8 \circ \circ 8// 6 8 3/8 В Return Opening Supply Opening 28 3/8 REQUIRED DIMENSIONS TO MAINTAIN
RECOMMENDED 1" CLEARANCE FROM 29 7/8
COMBUSTIBLE MATERIALS ⋖ ⋖ ⋖ REQUIRED DIMENSIONS TO MAINTAIN 1/4" MIN. CLEARANCE FROM COMBUSTIBLE MATERIALS \circ

FIGURE 15 TCURBT2430A Supply and Return Openings

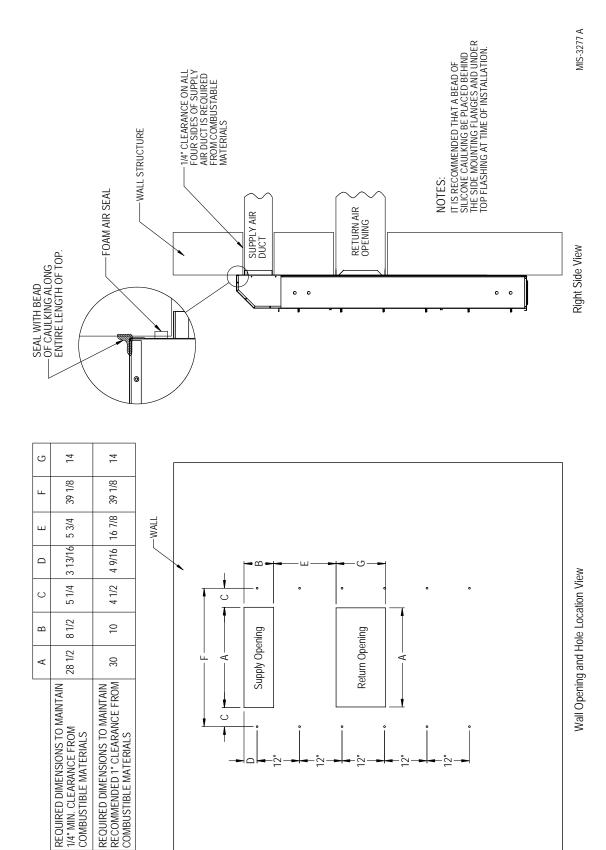


FIGURE 16
TCURBT3642A and TCURBT4860A
Supply and Return Openings

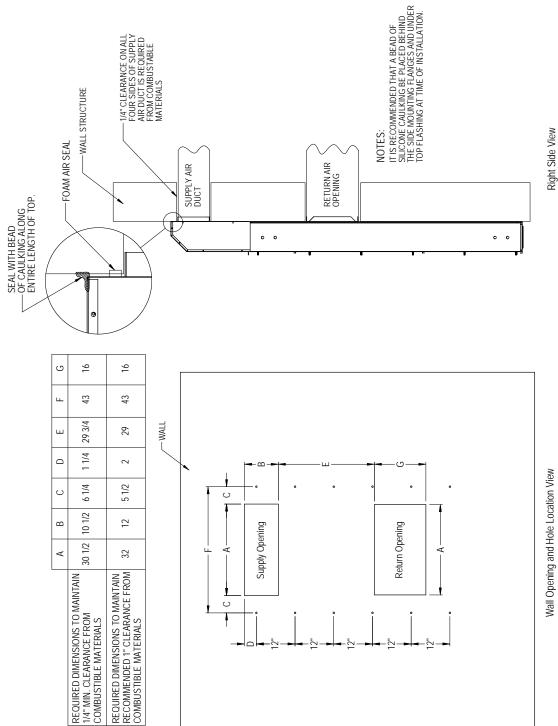
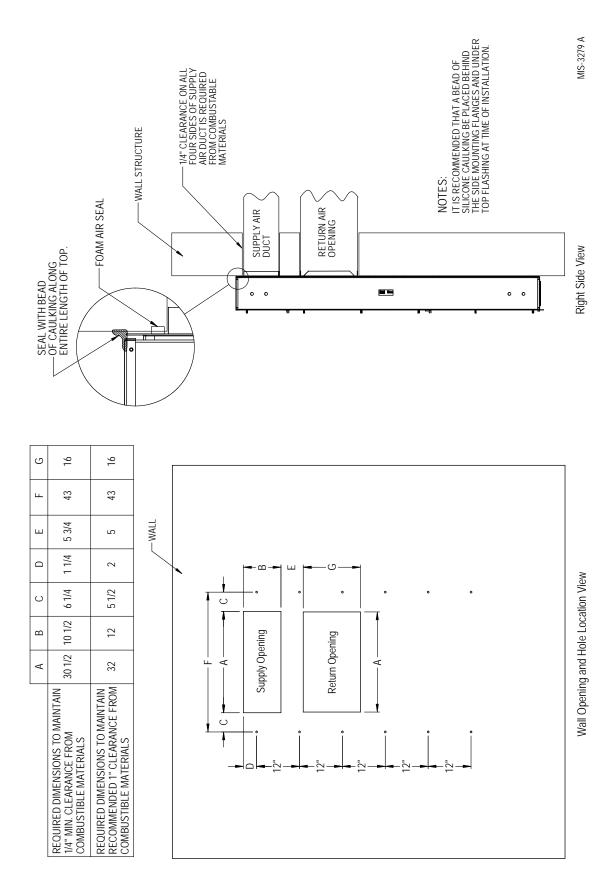
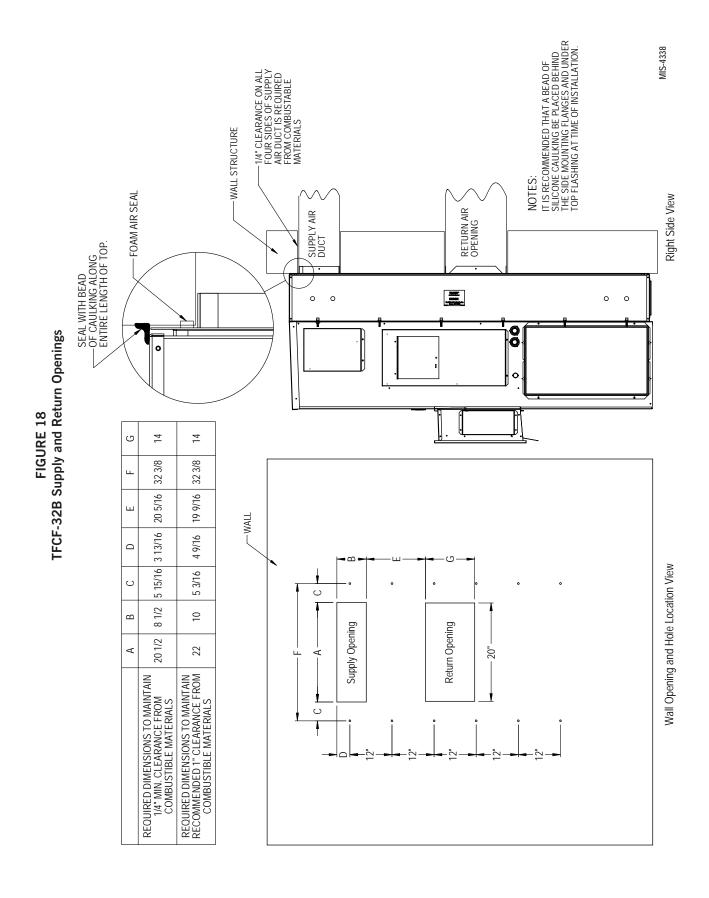


FIGURE 17
TCURBF3642A and TCURBF4860A
Supply and Return Openings





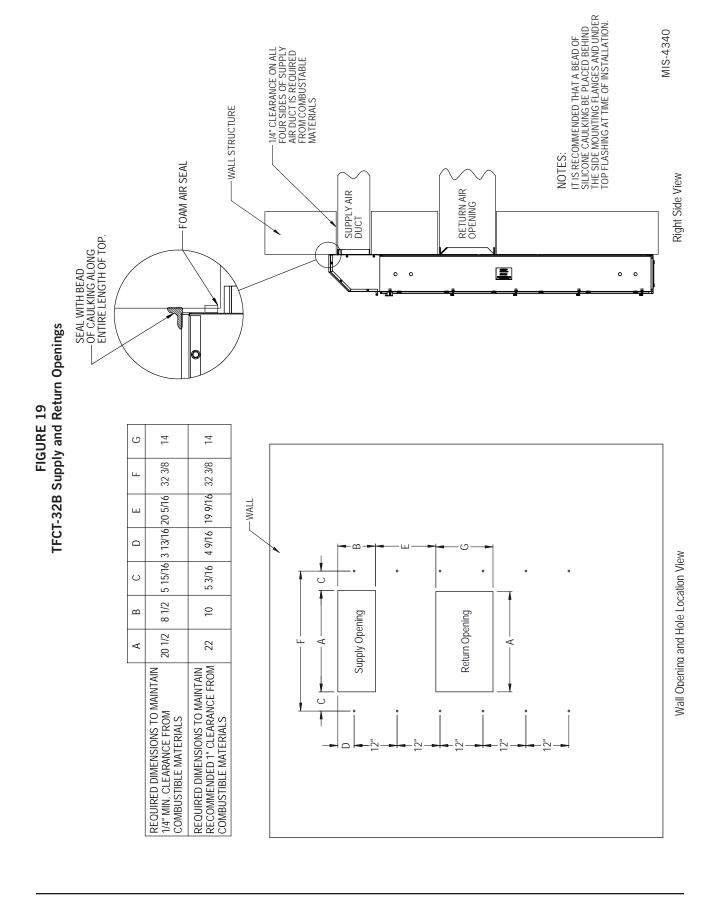


FIGURE 20
TFCF-53B Supply and Return Openings

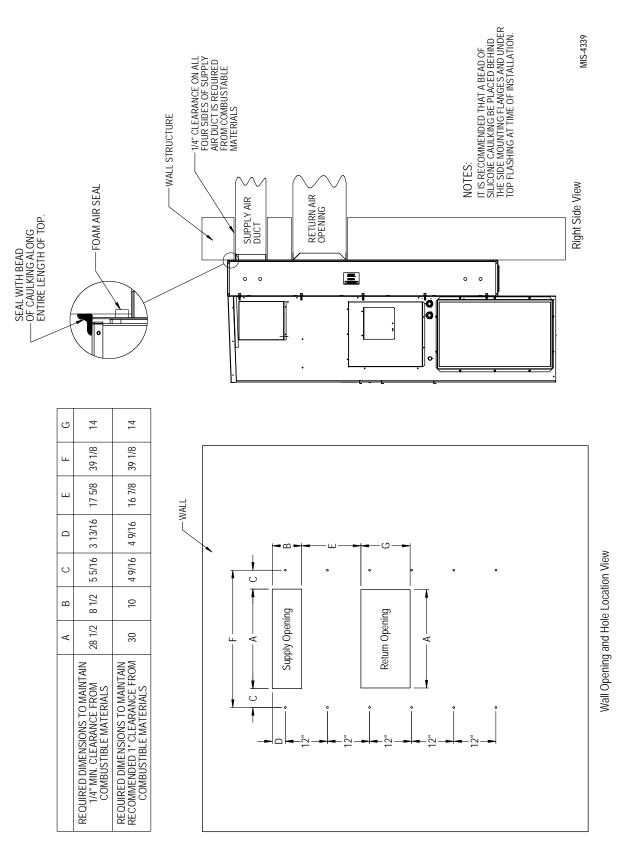


FIGURE 21
TFCT-53B Supply and Return Openings

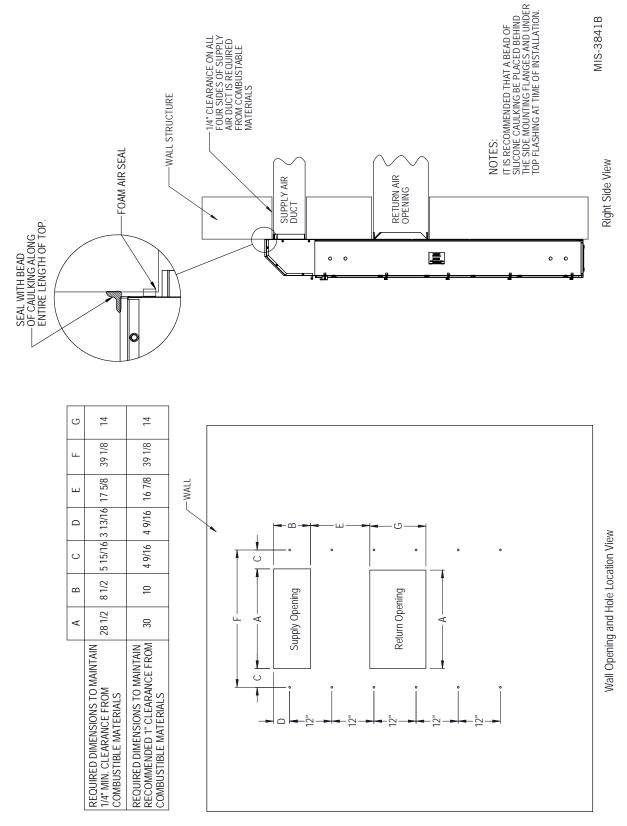
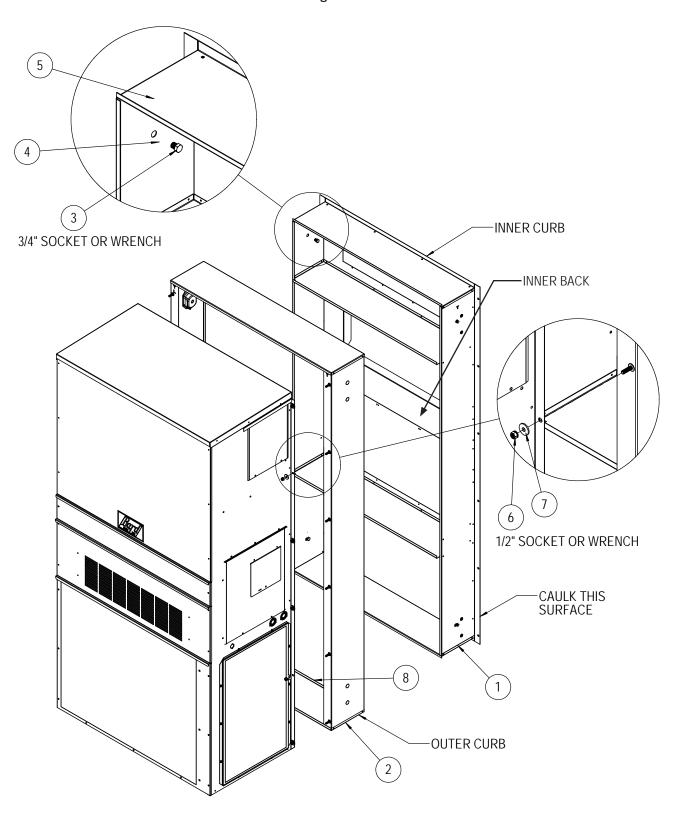


FIGURE 22 Fastening Unit to Curb



MIS-3086 A

FIGURE 23 Sealing with Caulk

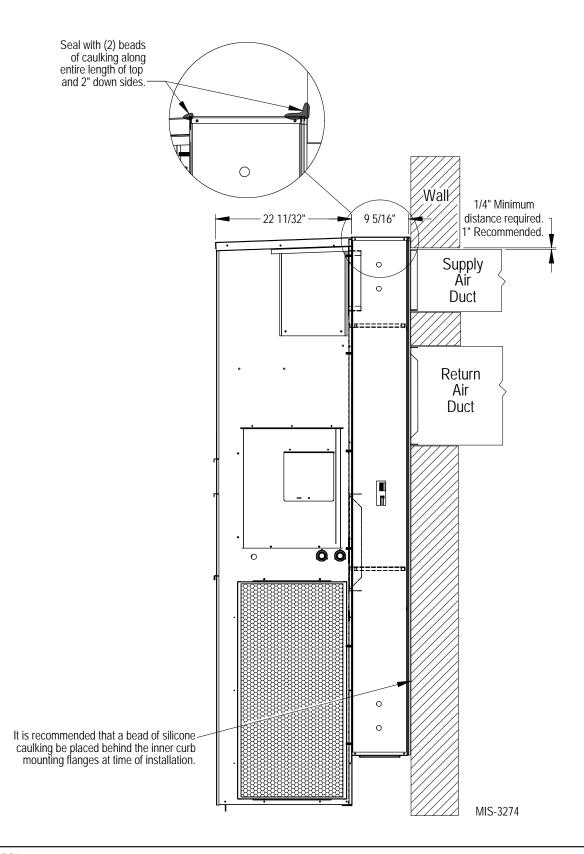


FIGURE 24
Sealing with Caulk (Top Outlet Curb)

