

## Option Installation

**Applies to:** Option CG, Stepdown Transformers for Unit Heater Models UDAP and UDAS All Sizes; and UDBP and UDBS Sizes 30-125

### Description

The stepdown transformer option, which “steps-down” the supply power from 208, 230 or 460 volts to 115 volts, includes the transformer and the parts required to mount and wire the transformer. The transformer bracket attaches to the heater.

Kit includes the following components. (NOTE: The transformer is shipped in its original carton. Other parts are shipped in a separate carton.)

### Kit Components

Quantities other than one are shown in parenthesis.



**Stepdown Transformer**

#### Stepdown Transformer Kits for Models UDBP and UDBS, Sizes 30-125

Option	Voltage	P/N by Size	30, 45	60, 75	100, 125
CG1	208/115	Option Pkg	260924	260925	260926
		w/Transformer	260928, .50KVA	223462, 1.0KVA	260931, 2.0KVA
CG2	230/115	Option Pkg	202976	202977	202978
		w/Transformer	11100, .50KVA	16065, 1.0KVA	202979, 2.0KVA
CG4	460/115	Option Pkg	202976	202977	202978
		w/Transformer	11100, .50KVA	16065, 1.0KVA	202979, 2.0KVA
<b>Other Components in Option Kits CG1, CG2, and CG4 for Models UDBP and UDBS</b>					
Transformer Bracket			197080		
Transformer Bracket Gasket			195663		
BX Cable, 3/8"			45097, 38"	174394, 46"	63292, 49"
Black wire 14 gauge, 105°C			32520, 54"	7208, 62"	123150, 65"
White wire 14 gauge, 105°C			201243, 54"	201242, 62"	123152, 65"
Green wire 14 gauge, 105°C			201241, 54"	201240, 62"	201468, 65"
Anti-Short Bushing			(2) 16358		
Straight Connector, T&B #302			16202		
90° Connector, T&B #XC-290			1417		
Cable Clamp, 1/2" Heyco #3328			16227		
Sheetmetal Screws			(3) 11813		
Wire Connector 73B			(10) 16354		

#### Stepdown Transformer Kits for All Sizes of Models UDAP and UDAS

Option	Voltage	P/N by Size	30	45, 60, 75, 100	125	150, 175	200	225, 250	300, 350, 400
CG1	208/115	Option Pkg	260919	262851	262850	262851	262850	260922	260923
		w/Transformer	260927, .25KVA	260928, .50KVA	260929, .75KVA	260928, .50KVA	260929, .75KVA	223462, 1.0KVA	260930, 1.5KVA
CG2	230/115	Option Pkg	197150	197151	262852	262853	262852	197153	197154
		w/Transformer	11279, .25KVA	11100, .50KVA	11217, .75KVA	11100, .50KVA	11217, .75KVA	16065, 1.0KVA	197085, 1.5KVA
CG4	460/115	Option Pkg	197150	197151	262852	262853	262852	197153	197154
		w/Transformer	11279, .25KVA	11100, .50KVA	11217, .75KVA	11100, .50KVA	11217, .75KVA	16065, 1.0KVA	197085, 1.5KVA
<b>Other Components in Option Kits CG1, CG2, and CG4 for Models UDAP and UDAS</b>									
Transformer Bracket			197080						
Transformer Bracket Gasket			195663						
3/8x1"lg Hex Head Cap Screw			32253						
3/8" Lock Washer			5197						
3/8" Flat Washer			(2) 6593						
BX Cable, 3/8"			45097, 38"	174394, 46"	63292, 49"	10460, 56"	201465, 70"		
Black wire 14 gauge, 105°C			32520, 54"	7208, 62"	123150, 65"	48862, 72"	201466, 86"		
White wire 14 gauge, 105°C			201243, 54"	201242, 62"	123152, 65"	48861, 72"	201467, 86"		
Green wire 14 gauge, 105°C			201241, 54"	201240, 62"	201468, 65"	201462, 72"	201469, 86"		
Anti-Short Bushing			(2) 16358						
Straight Connector, T&B #253			16199						
90° Connector, T&B #XC-290			1417						
Cable Clamp, 1/2" Heyco #3328			16227						
Sheetmetal Screws			(3) 11813						
Wire Connector 73B			(10) 16354						

# Installation Instructions

**WARNING:** Improper installation, adjustment, alteration, service, or maintenance can cause property damage, injury or death. Read the installation, operation, and maintenance instructions thoroughly before installing or servicing this equipment.

Installation should be done by a qualified agency in accordance with these instructions and in compliance with all codes and requirements of authorities having jurisdiction.

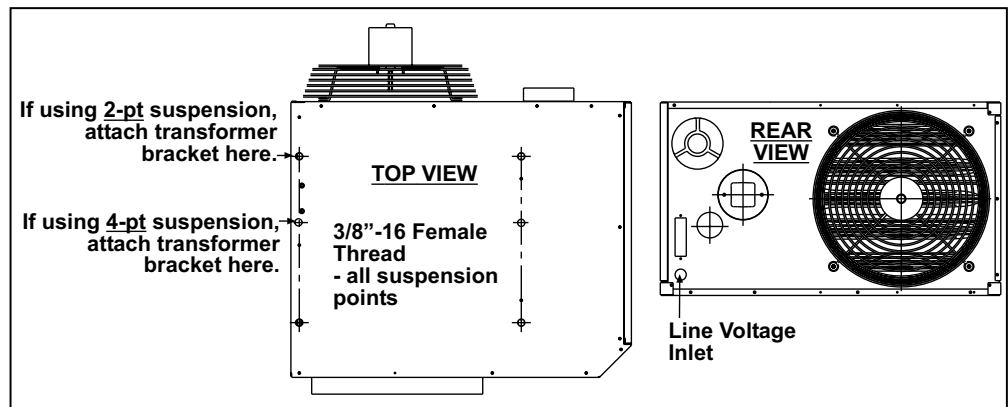
## 1. Bracket Mounting Location

The bracket mounts on the side of the heater opposite the access door (left side when facing the front of the heater).

a) **Models UDAP and UDAS** - The transformer bracket attaches at the “unused” suspension hole on the top of the heater. (See **FIGURE 1**.)

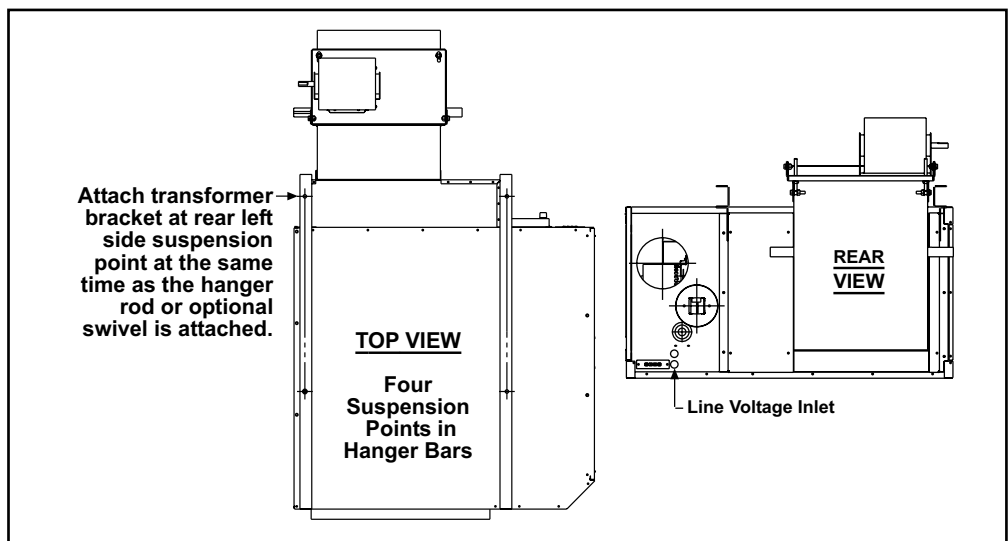
- If two point suspension is being used, mount the bracket in the 3/8” suspension hole toward the back of the heater.
- If four point suspension is being used, mount the bracket in the 3/8” suspension hole in the center.

**FIGURE 1 - Models UDAP and UDAS - Attach bracket to the cabinet at “unused” suspension hole.**



b) **Models UDBP and UDBS** - The transformer bracket will attach to the hanger bar at the suspension point and **MUST** be done as part of the suspension process. (See **FIGURE 2**.)

**FIGURE 2 - Models UDBP and UDBS - Attach transformer bracket as part of the suspension process when the hanger rod or optional swivel is attached.**



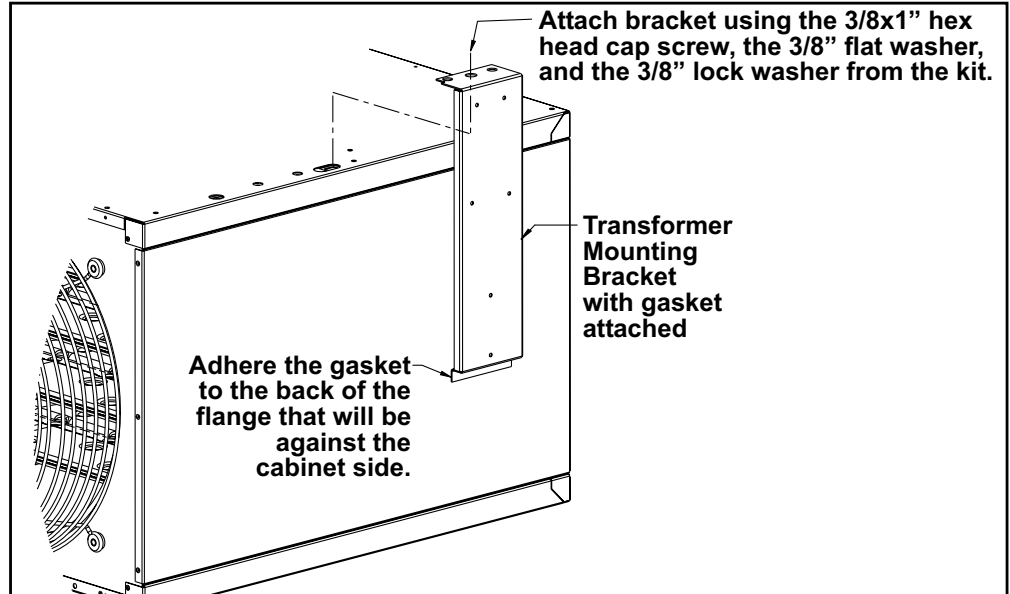
## 2. Attach the Gasket to the Bracket (All Models)

At the bottom of the bracket (refer to **FIGURE 3**), position the gasket strip on the back of the flange that will be against the cabinet side. Carefully peel the backing off and adhere the gasket strip.

### 3. Attach the Bracket

a) **Models UDAS and UDAP** - At the location selecte4d in **FIGURE 1**, attach the bracket using the 3/8 x 1" long screw, flat washer, and lock washer.

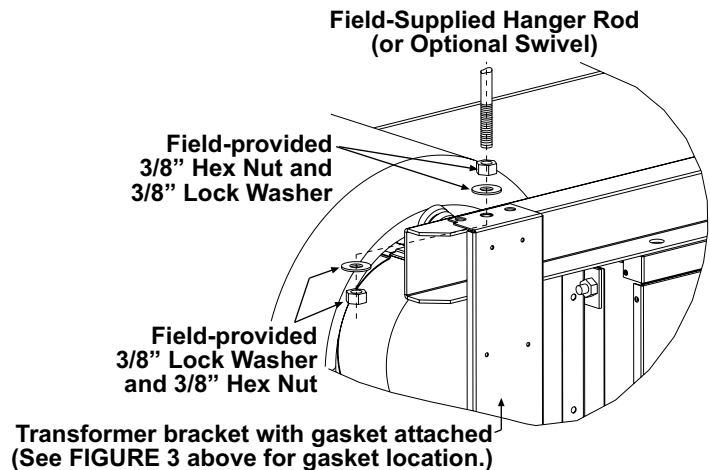
**FIGURE 3 - Fan Models UDAP and UDAS - Attach the bracket (with the gasket in place) using the hardware from the kit.**



b) **Models UDBS and UDBP** - When attaching the hanger rod or swivel connection to the hanger bar, include the transformer bracket at the suspension point shown in **FIGURE 2**.

**FIGURE 4 - Blower Models UDBP and UDBS Sizes 30-125** - During the suspension process, include the top of the transformer bracket when attaching the hanger rod (field-provided) or optional swivel to the hanger bar.

Follow the instructions in the installation manual (Form I-UDB, Paragraph 5.2) for hanging the heater.



### 4. Attach the Wires to the Transformer (All Models)

Feed the three wires through the conduit.

On each end of the conduit, install an anti-short bushing.

On the transformer, at either the knockout hole in the left side (facing the transformer) or in the bottom, attach the straight connector. Feed the wires into the connector and attach the connector to the conduit.

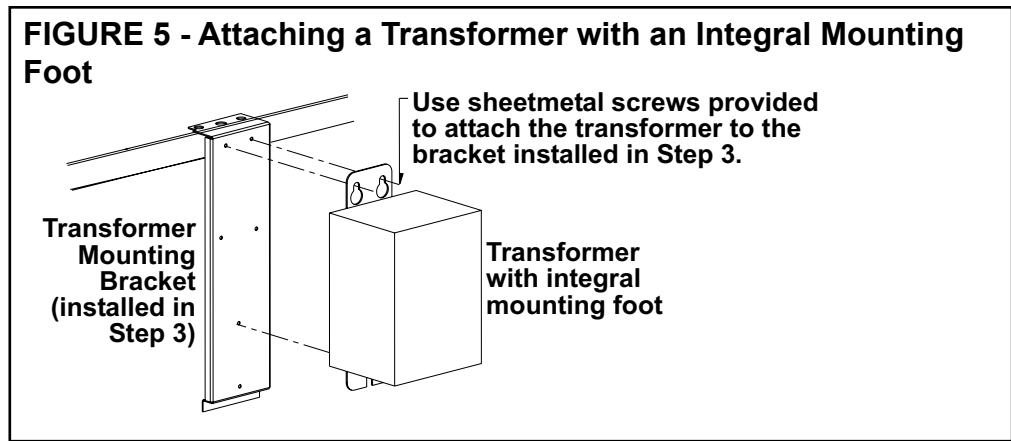
Following the diagram on the transformer, make the wiring connections. The transformer has primary and secondary voltages, so note the wire colors and be very careful when making these connections.

### 5. Attach the Transformer (All Models)

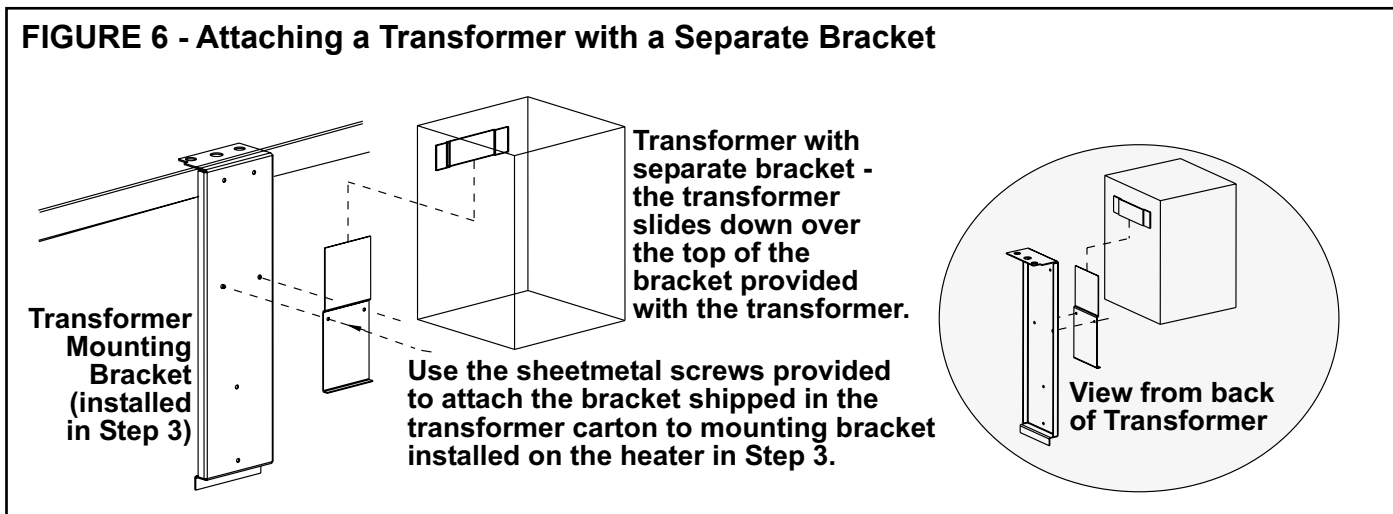
Depending on the transformer, it either attaches directly to the installed mounting bracket or uses a secondary bracket included with the transformer.

a) If the transformer has an attached mounting foot, install it as illustrated in **FIGURE 5**.

# Installation Instructions (cont'd)



b) If the transformer has a slot across the back and a secondary bracket, install it as illustrated in **FIGURE 6**.



## 6. Connect the Wires (All Models)

At the line voltage inlet on the rear of the heater (See **FIGURE 1 or 2**), attach the 90° connector so that the entrance is facing the fan or blower. Run the conduit from the transformer to the bottom rear of the heater and across to the connector. Feed the three wires through the connector and attach the connector to the conduit.

In the path of the conduit locate a cabinet screw. Remove the screw and use it to attach the cable clamp. Put the conduit into the cable clamp.

Remove the heater access panel. Follow the wiring diagram to connect the supply wiring.

7. Installation of the stepdown transformer is finished. Follow the instructions in the heater installation and venting manuals to complete the installation.

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