


TTBCKHE01, TTBCKHE02, & TTBCK03 THRU-THE-BOTTOM SERVICE CONNECTION KIT (FOR 3-12.5 TON AND 15-25 TON MODELS) LIGHT COMMERCIAL GAS UNITS INSTALLATION INSTRUCTIONS



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DAIKIN COMFORT TECHNOLOGIES MANUFACTURING, L.P.

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Safety Considerations

The following symbols and labels are used throughout this manual to indicate immediate or potential safety hazards. It is the owner's and installer's responsibility to read and comply with all safety information and instructions accompanying these symbols. Failure to heed safety information increases the risk of personal injury, property damage, and/or product damage.

	WARNING
<p>ONLY PERSONNEL THAT HAVE BEEN TRAINED TO INSTALL, ADJUST, SERVICE, MAINTENANCE OR REPAIR (HEREINAFTER, "SERVICE") THE EQUIPMENT SPECIFIED IN THIS MANUAL SHOULD SERVICE THE EQUIPMENT. THE MANUFACTURER WILL NOT BE RESPONSIBLE FOR ANY INJURY OR PROPERTY DAMAGE ARISING FROM IMPROPER SERVICE OR SERVICE PROCEDURES. IF YOU SERVICE THIS UNIT, YOU ASSUME RESPONSIBILITY FOR ANY INJURY OR PROPERTY DAMAGE WHICH MAY RESULT. IN ADDITION, IN JURISDICTIONS THAT REQUIRE ONE OR MORE LICENSES TO SERVICE THE EQUIPMENT SPECIFIED IN THIS MANUAL, ONLY LICENSED PERSONNEL SHOULD SERVICE THE EQUIPMENT.</p> <p>IMPROPER INSTALLATION, ADJUSTMENT, SERVICING, MAINTENANCE OR REPAIR OF THE EQUIPMENT SPECIFIED IN THIS MANUAL, OR ATTEMPTING TO INSTALL, ADJUST, SERVICE OR REPAIR THE EQUIPMENT SPECIFIED IN THIS MANUAL WITHOUT PROPER TRAINING MAY RESULT IN PRODUCT DAMAGE, PROPERTY DAMAGE, PERSONAL INJURY OR DEATH.</p>	

	WARNING
<p>HIGH VOLTAGE DISCONNECT ALL POWER BEFORE SERVICING OR INSTALLING THIS UNIT. MULTIPLE POWER SOURCES MAY BE PRESENT. FAILURE TO DO SO MAY CAUSE PROPERTY DAMAGE, PERSONAL INJURY OR DEATH.</p>	

	WARNING
DO NOT BYPASS SAFETY DEVICES	

	PART NO.	DESCRIPTION	QTY
TTBCKHE01	0163L00152	1/2" Gas Adapter Fitting	1
	0163L00154	1/2" Elec. Bulkhead Connector	2
	0163L00196	1-1/2" Elec. Bulkhead Connector	1
	0121L02301	Bracket Thru the Base	1
	B1910010	Gas Line Grommet	1
	B1393561	#10 x 1/2" Self Drilling Screw	2
TTBCKHE02	0163L00154	1/2" Elec. Bulkhead Connector	2
	0163L00197	2" Elec. Bulkhead Connector	1
TTBCK03	0163L00153	3/4" Gas Adapter Fitting	1
	0163L00154	1/2" Elec. Bulkhead Connector	2
	0163L00198	2-1/2" Elec. Bulkhead Connector	1

Table 1 - Thru-the-Bottom Connection Parts

DESCRIPTION

Thru-the-bottom service connection kits reduce the number of penetrations in the roof. They provide a watertight way to connect power wiring, control wiring, and the gas supply line through the base of the unit in the condenser section. External connectors must be weatherproof. All holes in the unit base must be sealed (including those around conduit nuts) to prevent water leakage into the building.

When the thru-the-bottom power accessory package is purchased, one of two bulkhead connector sets may be selected for power connections (depending on unit size). Each set contains 3 to 4 bulkhead connectors, depending on unit tonnage (Table 1). The 1/2" or 3/4" in. diameter bulkhead connectors enable the low-voltage control, and optional convenience outlet, wires to pass through the basepan. The 1-1/2, 2, or 2-1/2 in. bulkhead connector allows the high voltage power wires to pass through the basepan. The 1/2 in. gas adapter fitting allows the gas line to come up through the basepan (3 to 6 ton units only).



INSTALLATION

Disconnect all power before installing this kit and lockout / tag out. Make sure the roof curb is installed and leveled in accordance with the instructions provided with kit.

The thru-the-bottom service connection accessory kit must be used with a light commercial unit that has embossment in the outdoor section of the basepan. This embossment allows high-voltage power, control wiring, and gas connections to pass through the roof curb and into the basepan of the rooftop unit.

PREPARING THE UNIT FOR INSTALLATION

The accessory thru-the-bottom power or gas connection kit fittings must be installed before the unit is set on the roof curb. Gas and electrical connections to the unit must be field installed after the unit is installed on the roof curb.

INSTALL THE UNIT ON THE ROOF CURB

Follow all appropriate instructions required to install the rooftop unit on the roof curb. See installation instructions provided with the roof curb and unit for more specific information.

CREATING HOLES IN THE RAISED SURFACE OF THE UNIT BASEPAN

Each unit is equipped with a raised (embossed) surface in the basepan. This area is located in the compressor compartment (outdoor section) of the unit (see Figure 1). The embossment of the basepan contains three (3) dimples for locating cutouts. Holes can be field cut in the embossed surface so that high voltage power, control wires, and gas connection can be routed through the roof curb basepan.

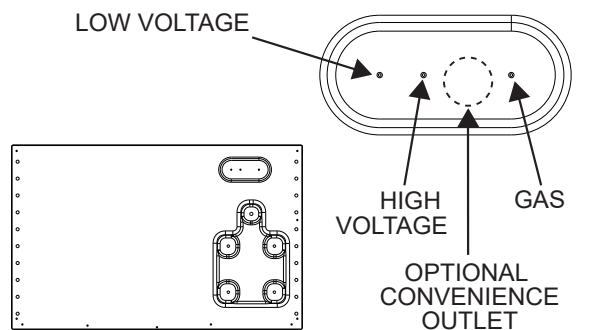


Fig. 1 - 3 - 6 Ton Basepan

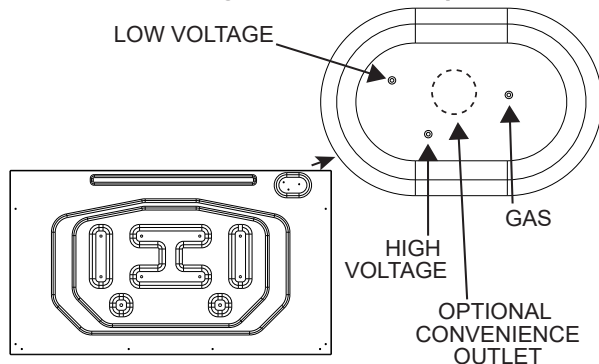


Fig. 2 - 7.5 - 12.5 Ton Basepan

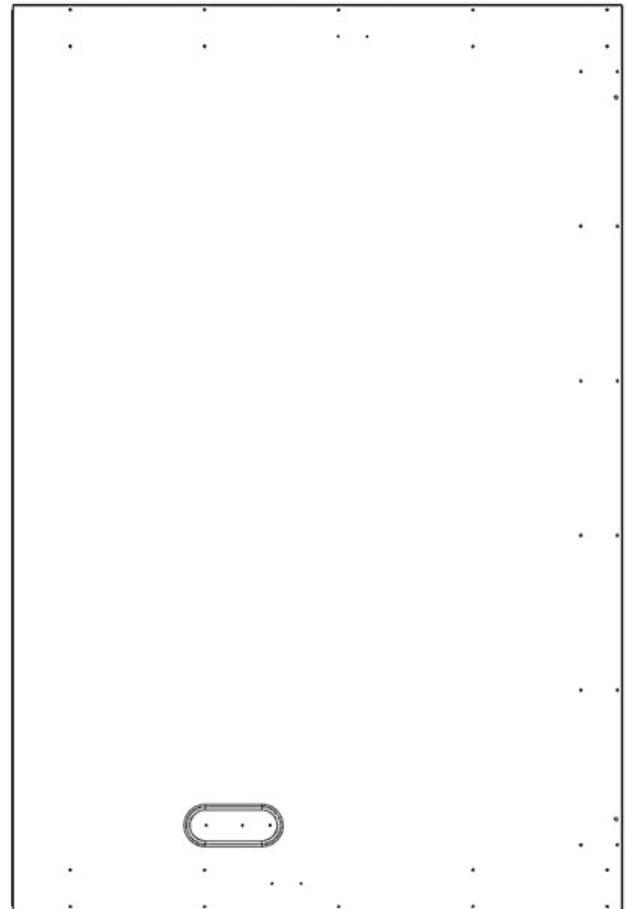


Fig. 3a - 15 - 25 Ton Basepan

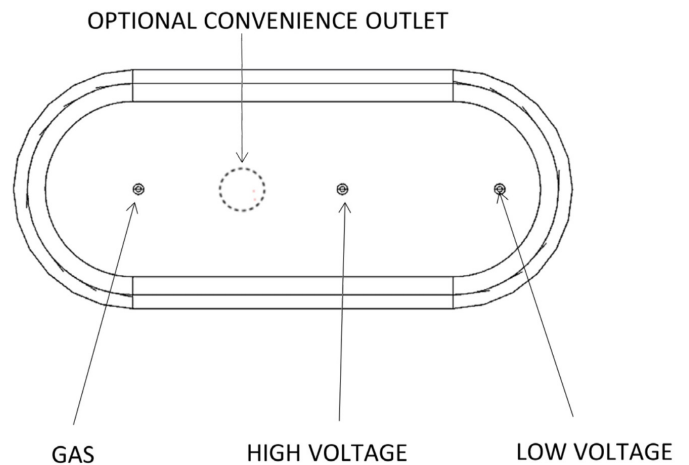


Fig. 3b - 15 - 25 Ton Basepan

Use a chassis punch or hole saw to create holes in the embossed surface of the basepan per Table 2.

CONNECTION SIZE	USE	REQ. HOLE SIZE
1/2"	Low Voltage	7/8"
1/2"	Gas	1"
1-1/2"	High Voltage	2"
2"	High Voltage	2-1/2"
2-1/2"	High Voltage	3"

Table 2 - Bottom Power Chart

MOUNTING ELECTRIC BULKHEAD CONNECTORS

Once the holes have been cut place electrical bulkhead connectors in basepan. Place gasket and lock ring end of connector beneath the basepan and mount the other end above the basepan.

When the electrical connectors are in place, field supplied and installed liquid tight conduit connectors and conduit may be attached to the connectors. Pull correctly rated high voltage and low voltage wires through appropriate conduits and connect to units per roof top units installation instructions.

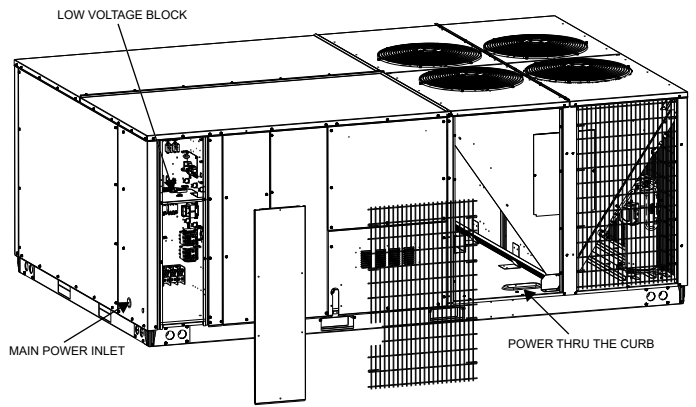


Fig. 6 - 15 - 25 Ton Power Connections

MAKING GAS CONNECTIONS

The thru-the-bottom gas connection fitting has male and female threads. The gas fitting also contains two neoprene washers and two locking washers. One neoprene and one locking washer are installed below the unit basepan with the second set being installed on the top side of the basepan before the fitting is tightened. Tighten all fittings. The male threads protrude above the basepan of the unit, and the female threads protrude below the basepan.

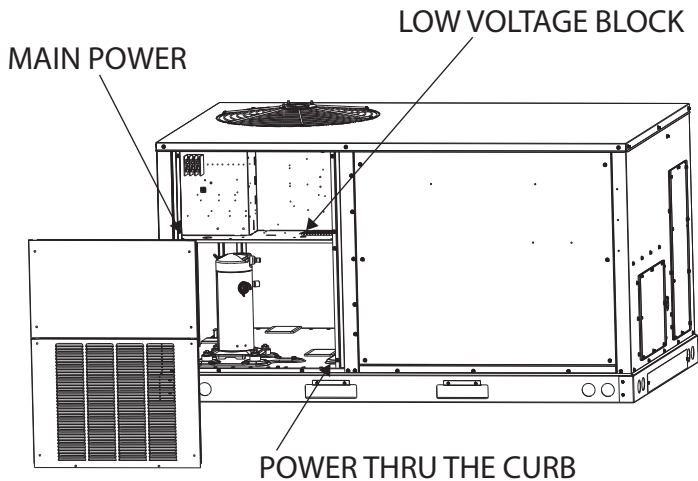


Fig. 4 - 3-6 Ton Power Connections

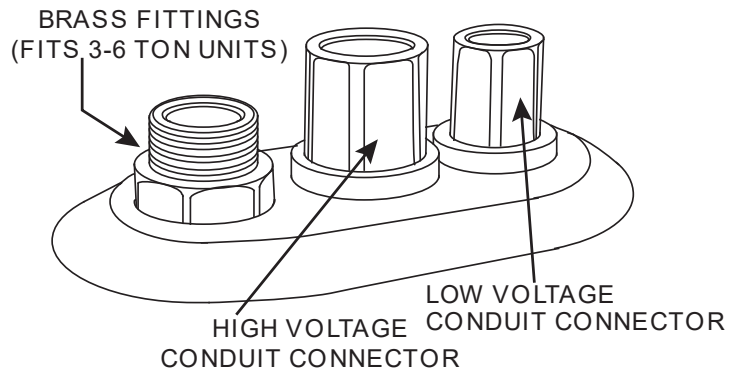


Fig. 7

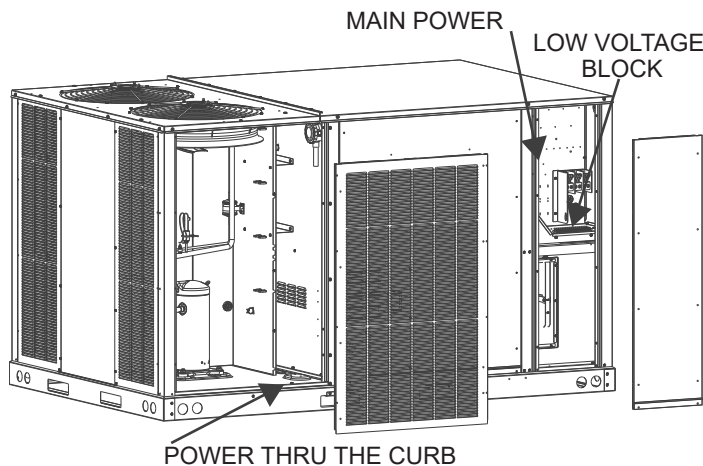


Fig. 5 - 7.5 - 12.5 Ton Power Connections

Install a 5" black pipe nipple and an elbow on the through-the-basepan gas fitting (1/2-in. for 3-6 Ton kit, 3/4-in. for 15-25 Ton kit). If using 1/2-in. pipe, a minimum 12-in. nipple (field-supplied) is required to attach to the elbow. It extends the gas piping through compressor access panel (if unit is so equipped). If using 3/4-in. pipe, a minimum 15-in. nipple (field-supplied) is required to extend the gas piping through compressor access panel. Install the gas pipe support bracket to the inside of unit using provided screws. Remove the bottom right ten louvers from the right side of the louvered compressor access panel to allow gas line to exit the unit.



Fig. 8



Fig. 9



Fig. 10

INSTALLING GAS PIPING

The rating plate is stamped with the model number, type of gas and gas input rating. Make sure the unit is equipped to operate on the type of gas available. Conversion to propane (LP) gas is permitted with the use of the factory authorized conversion kit (see the unit Spec Sheets for the appropriate kit). For High Altitude derates, refer to the latest edition of the National Fuel Gas Code NFPA 54/ANSI Z223.1.

A manual gas shut off valve must be field installed external to the roof top unit. In addition, a drip leg must be installed near the inlet connection. A ground joint union connection is required between the external shut off valve and the unit connection to the gas valve to permit removal of the burner assembly for servicing.

NOTE: Inlet gas pressures must not exceed the maximum value shown in Table 3 below.

INLET GAS PRESSURE	
NATURAL	Min. 5.0" W.C., Max. 10.0" W.C.
PROPANE	Min. 11.0" W.C., Max. 14.0" W.C.

Table 3 - Inlet Gas Pressure

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CUSTOMER FEEDBACK

Daikin Comfort Technologies is very interested in all product comments.

Please fill out the feedback form on the following link:

<https://daikincomfort.com/contact-us>

You can also scan the QR code on the right to be directed to the feedback page.



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