

Installation Instructions

NOTE: Read the entire instruction manual before starting the installation.

SAFETY CONSIDERATIONS

Improper installation, adjustment, alteration, service, maintenance, or use can cause explosion, fire, electrical shock or other conditions which may cause death, personal injury or property damage. Consult a qualified installer, service agency, or your distributor or branch for information or assistance. The qualified installer or agency must use factory-authorized kits or accessories when modifying this product. Refer to the individual instructions packaged with the kits or accessories when installing.

Follow all safety codes. Wear safety glasses, protective clothing and work gloves. Use quenching cloths for brazing operations. Have fire extinguisher available. Read these instructions thoroughly and follow all warnings or cautions attached to the unit. Consult local building codes and the current editions of the National Electrical Codes (NEC) NFPA 70.

In Canada, refer to the current editions of the Canadian Electrical Code CSA C22.1.

Recognize safety information. This is the safety-alert symbol ⚠. When you see this symbol on the unit and in instructions or manuals, be alert to the potential for personal injury.

Understand the signal words DANGER, WARNING and CAUTION. These words are used with the safety-alert symbol. DANGER identifies the most serious hazards which will result in severe personal injury or death. WARNING signifies hazards which could result in personal injury or death. CAUTION is used to identify unsafe practices, which may result in minor personal injury or product and property damage. NOTE is used to highlight suggestions which will result in enhanced installation, reliability, or operation.

⚠ WARNING

ELECTRICAL SHOCK HAZARD

Failure to follow this warning could result in personal injury or death. Before installing, modifying or servicing system, always turn off main power to system. There may be more than one disconnect switch. Lock out and tag switch with a suitable warning label.

⚠ CAUTION

CUT HAZARD

Failure to follow this caution may result in personal injury. Sheet metal parts may have sharp edges or burrs. Use care and wear appropriate protective clothing and gloves when handling parts.

INTRODUCTION

These kits are designed to be installed in FED / FEU fan units. Accessory Coil Kit/Fan Unit match-ups, and approved applications are listed in [Table 1](#).

PROCEDURE 1 — CHECK EQUIPMENT

Inspect equipment for damage prior to installation. File claim with shipping company if shipment is damaged or incomplete. Locate the rating plate attached to the coil assembly. Check the rating plate model number, [Table 1](#), and the AHRI Directory to ensure outdoor and indoor units are properly matched and meet job specifications.

A. Downflow Applications ([Fig. 1](#))

IMPORTANT: Make certain that the electric furnace is level or slightly pitched toward the drain lines to assure proper condensate drainage.

1. Remove the coil access panel.
2. For both Slope and A-coil downflow installations, remove and discard the plastic cap that covers the drain hole in the access panel. Do not discard the plastic cap for upflow units.

NOTE: The NADA44801CK coil kit is shipped with a #63 heating piston in a separate parts bag. When combining this kit with an R4H442 outdoor unit, replace the piston in the outdoor unit service valve with the #63 piston to achieve rated heating performance.

NOTE: There is a small weep hole between the primary and secondary drains. For downflow applications, this is a safety feature and must not be blocked.

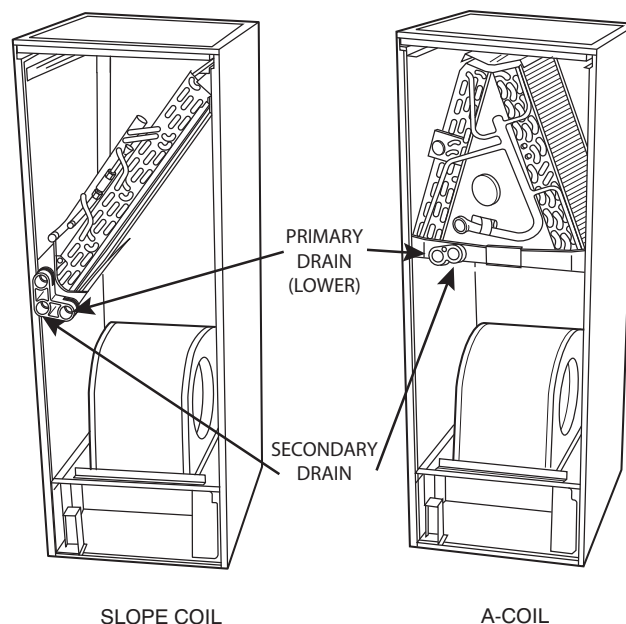


Fig. 1 – Downflow

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For slope coils

1. Insert the coil baffle shipped with the coil into the back of the pan. This baffle is required to avoid potential water blowout of the drain pan ([Fig. 2](#)).

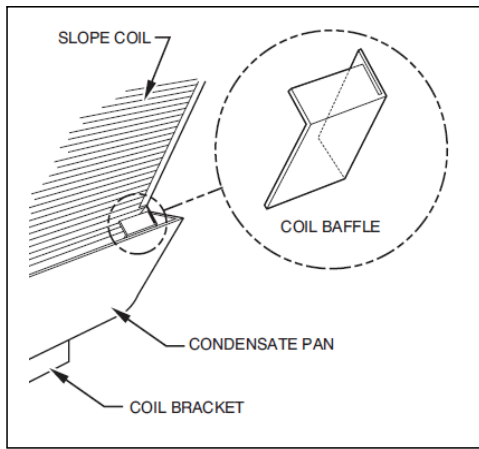


Fig. 2 – Coil Baffle Location

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2. Insert the pan baffle into the drain pan. **This baffle is required** to avoid potential water blowout of the drain pan.
 - Install the pan baffle into the pan as shown in Fig. 3 and Fig. 4.
 - For orientation of the pan baffle, refer to Fig. 3. The straight side of the baffle will be against the inside of the pan, with the angled part facing the coil.
3. Slide the coil and pan assembly onto the shelf provided in the cabinet (Fig. 5).
4. Mount the coil by attaching a screw through the coil top bracket and into the hole provided in the side of the unit casing.

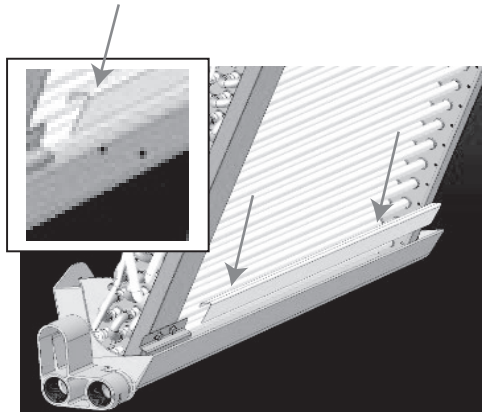


Fig. 3 – Pan Baffle

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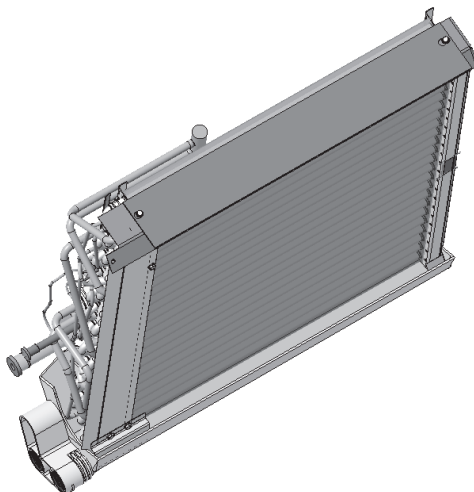
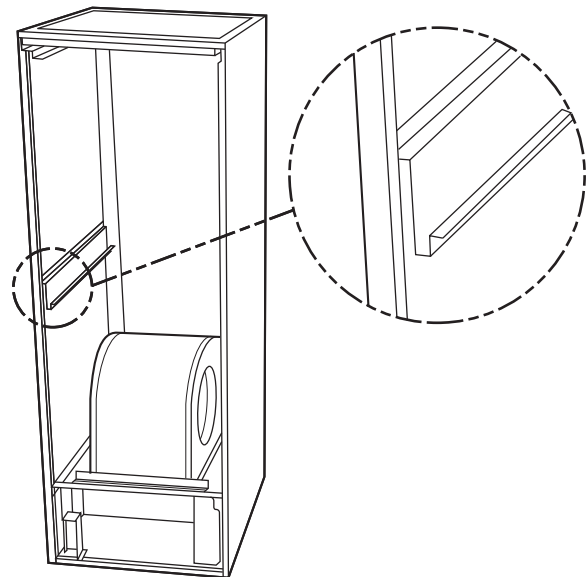


Fig. 4 – Pan Baffle Installed

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SLOPE COIL

Fig. 5 – Slope Coil Shelves

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OPTIONAL — Additional Condensate Management

Optional parts are included in this kit as additional method for condensate management. Note that these add-ons are not required for unit operation: These components can be installed using the following instructions:

IMPORTANT: Make sure to turn off and lock out all power sources to the fan coil unit.

1. Remove the coil door from the downflow furnace.
2. Install the optional pan extension, per Fig. 6 and Fig. 7.
3. Slide the extension from front to back of pan lip, making sure it slides in between the two pieces of metal.
4. Make sure the pan extension is secure/tight and all the way down on the pan.
5. If necessary, temporarily remove the small coil baffle in the rear of the pan (Fig. 2) to fully engage the pan extension. Replace it after installing the pan extension.
6. Replace the coil door on the furnace.
7. Remove lockouts and apply power to the unit.

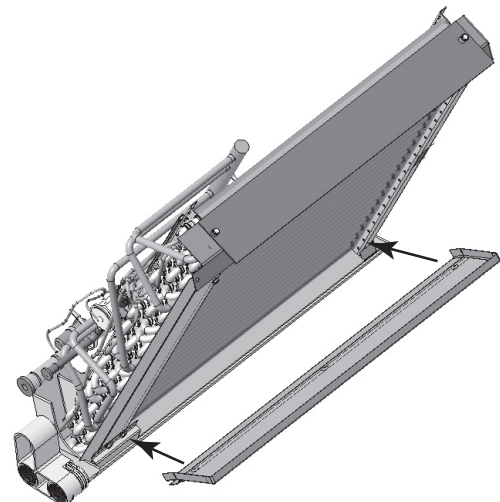


Fig. 6 – Optional Pan Extension

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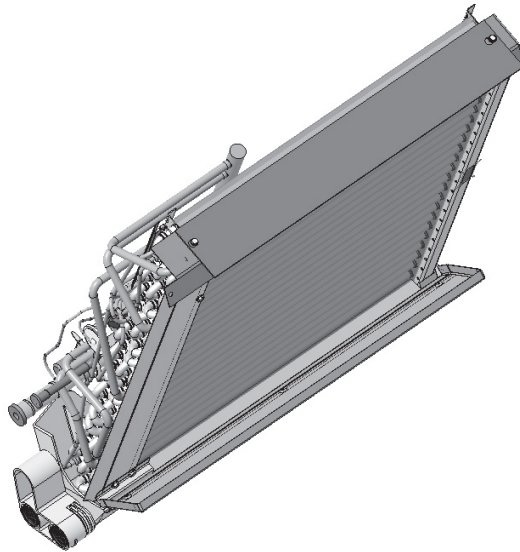


Fig. 7 – Optional Pan Extension Installed

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Table 1 – Product Offering and Application

Accessory Coil	Matched Electric Furnace	Downflow / Upflow	Coil Type
NADA43601CK	FED0024**	Downflow	Slope
	FED0036**	Downflow	Slope
NADA44801CK	FED0048**	Downflow	A
NADA46001CK	FED0060**	Downflow	A
NAUA43601CK	FEU0024**	Upflow	Slope
	FEU0036**	Upflow	Slope
NAUA44801CK	FEU0048**	Upflow	A
NAUA46001CK	FEU0060**	Upflow	A

NOTE: Check AHRI Directory for approved outdoor/indoor unit combinations.

Indoor Unit Airflow Setup

The unit is factory provided for electric heat operation only. A cooling coil adds airflow restriction and requires speed tap changes ([Table 2](#), [Table 3](#)).

Table 2 – Cooling and HP Airflow Settings

Recommended Setup Assuming 0.3" w.c. Static Pressure						
Indoor Unit	Outdoor Unit Size	Factory Default Cont. Fan Tap (blue wire)	Recommended Tap with Cooling Coil (blue wire)	Factory Default Electric Heat Tap (white wire)	Electric Heat Tap with Coil (white wire)	Change Required When Adding Coil
FE(D,U)0024**	18	1	1	2	4	Electric Heat Only
FE(D,U)0024**	24	1	3	2	4	Electric Heat and Cool Taps
FE(D,U)0036**	30	1	1	2	4	Electric Heat only
FE(D,U)0036**	36	1	3	2	4	Electric Heat and Cool Taps
FE(D,U)0048**	42	1	1	2	4	Electric Heat Only
FE(D,U)0048**	48	1	2	2	4	Electric Heat and Cool Taps
FE(D,U)0060**	60	1	3	2	4	Electric Heat and Cool Taps

Table 3 – Airflow Performance - with Accessory Cooling Coil (CFM)

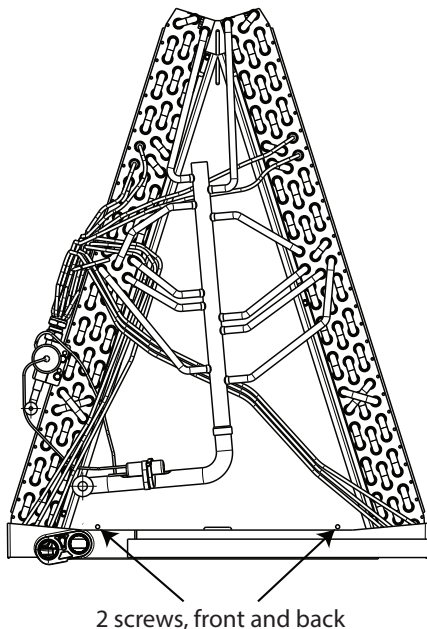
Size	Blower Speed	Total Static (inches water column)					
		0.10	0.20	0.30	0.40	0.50	0.60
FE(D, U)002410	TAP 5	976	924	859	790	736	690
	TAP 4	810	774	710	661	605	568
	TAP 3	850	786	721	672	625	585
	TAP 2	735	661	601	549	504	449
	TAP 1	590	541	489	440	383	333
FE(D, U)003610 FE(D, U)003612 FE(D, U)003615	TAP 5	1266	1234	1208	1174	1138	1106
	TAP 4	1239	1210	1177	1145	1107	1072
	TAP 3	1229	1201	1170	1141	1110	1076
	TAP 2	1107	1074	1039	1007	973	937
	TAP 1	1048	1016	979	941	906	867
FE(D, U)004815	TAP 5	1615	1598	1566	1534	1504	1464
	TAP 4	1533	1504	1471	1439	1399	1359
	TAP 3	1549	1517	1474	1438	1404	1360
	TAP 2	1330	1299	1258	1218	1181	1140
	TAP 1	1218	1185	1148	1102	1056	978
FE(D, U)006020	TAP 5	1879	1849	1820	1789	1758	1724
	TAP 4	1686	1656	1622	1588	1557	1522
	TAP 3	1696	1662	1631	1599	1567	1532
	TAP 2	1559	1520	1486	1451	1414	1376
	TAP 1	1356	1323	1290	1247	1198	1156

For A-coil

The coil and pan are shipped separately in the same box:

1. Remove the coil and pan from the box.
2. Attach the pan to the coil using the four supplied screws (Fig. 8).
3. Install the coil/pan assembly onto the two shelves provided in the coil area of the furnace.
4. Re-attach the panels and go to the refrigerant tubing and drain installation.

NOTE: Caulk around the pan fitting to door joint to avoid air leakage.

**Fig. 8 – Attach Pan to Coil**

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B. Upflow Application

Remove coil access panel/fitting panel assembly (6 outside screws). Slide coil assembly into coil area of fan unit.

For upflow applications, do not discard the plastic cap in the drain hole of the access door. Remove the knockouts in the plastic cap to allow primary and secondary drain connections.

1. For slope coils, rest coil assembly on coil support in fan unit after coil is roughly 2/3 inserted. Tabs on pan should snap into slots in coil support when coil is fully and properly inserted.
2. For slope coils, mount coil by attaching a screw through the coil top bracket into the hole provided in the side of the unit casing.

The coil and pan are shipped separately in the same box:

- Remove the coil and pan from the box.
 - Attach the pan to the coil using the four supplied screws (Fig. 8).
 - Install the coil/pan assembly onto the two shelves provided in the coil area of the furnace.
3. Re-attach the coil door and go to the refrigerant tubing and drain installation.

PROCEDURE 2 — REFRIGERANT TUBING

Use accessory tubing package or field-supplied tubing of refrigerant grade. Suction tube must be insulated. Do not use damaged, dirty, or contaminated tubing because it may plug refrigerant flow-control device. ALWAYS evacuate the coil and field-supplied tubing before opening outdoor unit service valves. Refer to the outdoor unit instructions for evacuation information.

Braze connection using silver bearing or non-silver bearing brazing materials. Do not use solder materials that melt below 800 °F (427 °C). Consult local code requirements.

PROCEDURE 3 — CONDENSATE DRAIN

Units are equipped with primary and secondary 3/4" FPT drain connections. It is recommended that PVC fittings be used on the plastic condensate pan. Do not over-tighten. Finger-tighten plus 1-1/2 turns. For proper condensate line installation review [Fig. 1](#) and [Fig. 9](#).

! CAUTION

UNIT OR PRODUCT DAMAGE HAZARD

Failure to follow this caution may result in unit or product damage.

BOTH primary and secondary drain lines should be installed and include properly sized condensate traps. Shallow, running traps are inadequate and do not allow proper condensate drainage. Use pipe dope. Do not over-torque. Hand tighten plus 1-1/2 turns.

NOTE: When connecting condensate drain lines, avoid blocking filter access panel, thus preventing filter removal. After connection, prime both primary and secondary condensate traps.

IMPORTANT: The owner of the structure must be informed that when condensate flows from the secondary drain, the unit requires servicing or else water damage will occur.

Optionally, a float switch may be used in lieu of a secondary drain. If so, make sure the float switch is installed so that it will trip before the water exits the weep hole between the drain pans. The float switch may be installed in the primary drain line or inside the pan. If installing in the secondary drain, make sure the float switch is below the exit of the drain.

NOTE: Do not install the float switch at the same level as the secondary drain exit.

Install traps in the condensate lines as close to the coil as possible ([Fig. 9](#)). Make sure that the outlet of each trap is below its connection to the condensate pan to prevent condensate from overflowing the drain pan. Prime all traps and test for leaks.

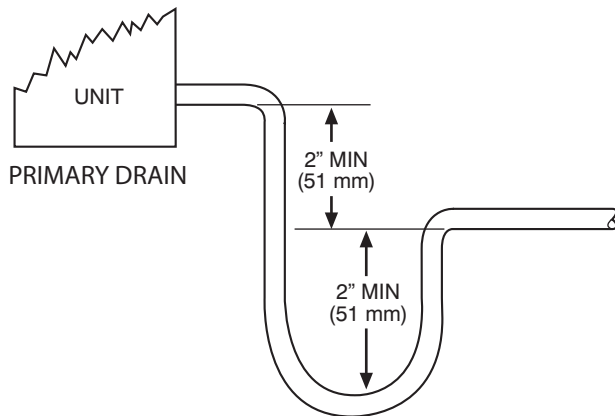


Fig. 9 – Recommended Condensate Trap

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Fig. 10 – Insufficient Condensate Trap

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Condensate drain lines should be pitched downward at a minimum slope of 1" for every 10 feet of length. Consult local codes for additional restrictions or precautions.

UNIT START-UP

Refer to outdoor unit Installation Instructions for system start-up instructions and refrigerant charging method details. Also refer to the NADA/NAUA wiring layout diagrams ([Fig. 11](#), [Fig. 12](#)).

! CAUTION

UNIT OR PRODUCT DAMAGE HAZARD

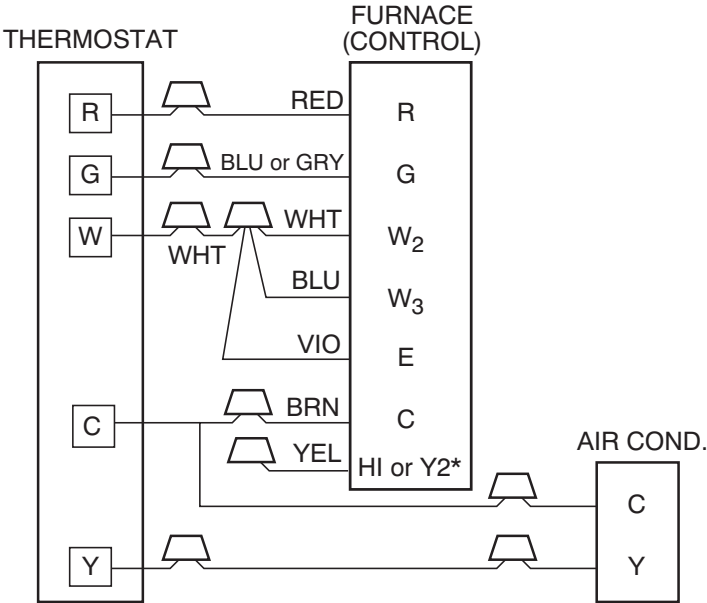
Failure to follow this caution may result in unit or product damage.

Never operate the unit without a filter. Damage to the blower motor or coil may result. For those applications where access to an internal filter is impractical, a field supplied filter must be installed in the return duct system.

CARE AND MAINTENANCE

To continue high performance and minimize possible equipment failure, it is essential that periodic maintenance be performed on this equipment. Consult your local dealer as to the proper frequency of maintenance and the availability of a maintenance contract.

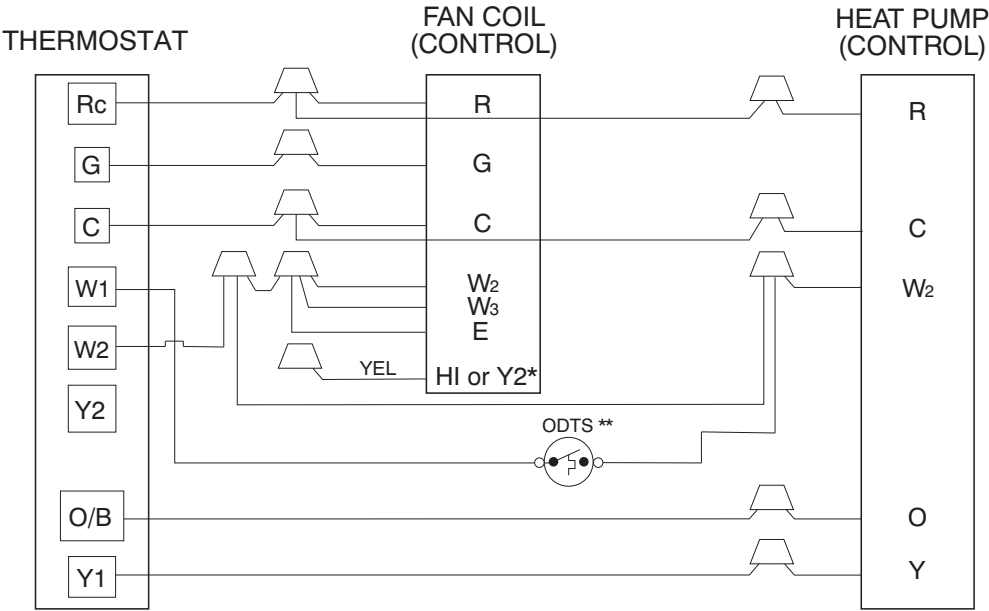
The ability to properly perform maintenance on this equipment requires certain mechanical skills and tools. If you do not possess these, contact your dealer for maintenance. The only consumer service recommended or required is filter replacement or cleaning on a monthly basis.



* The yellow wire is used for high static only if necessary. If maximum airflow is desired, connect the "G" thermostat wire to the yellow HI or Y2 wire.

**Fig. 11 – Wiring Layout - Air Conditioning Unit
(Cooling and 1-Stage Heat)**

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* The yellow wire is used for high static only if necessary. If maximum airflow is desired, connect the "G" thermostat wire to the yellow HI or Y2 wire.

** Accessory outdoor thermostat

**Fig. 12 – Wiring Layout - Heat Pump Unit
(Cooling and Heat)**

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