

# Installation Instructions

## Vertical Wall Mount Air Handler

These instructions are primarily intended to assist qualified individuals experienced in the proper installation of heating and/or air conditioning appliances. Some local codes require licensed installation/service personnel for this type equipment. All installations must be in accordance with these instructions and with all applicable national and local codes and standards.

Before beginning the installation, read these instructions thoroughly and follow all warnings and cautions in the instructions and on the unit. When performing brazing operations have a fire extinguisher readily available and use a quenching cloth and brazing shield.

Improper installation, service, adjustment, or maintenance can cause fire, electrical shock or other conditions which may result in personal injury or property damage. Unless otherwise noted in these instructions, only factory authorized kits or accessories may be used when modifying this product.

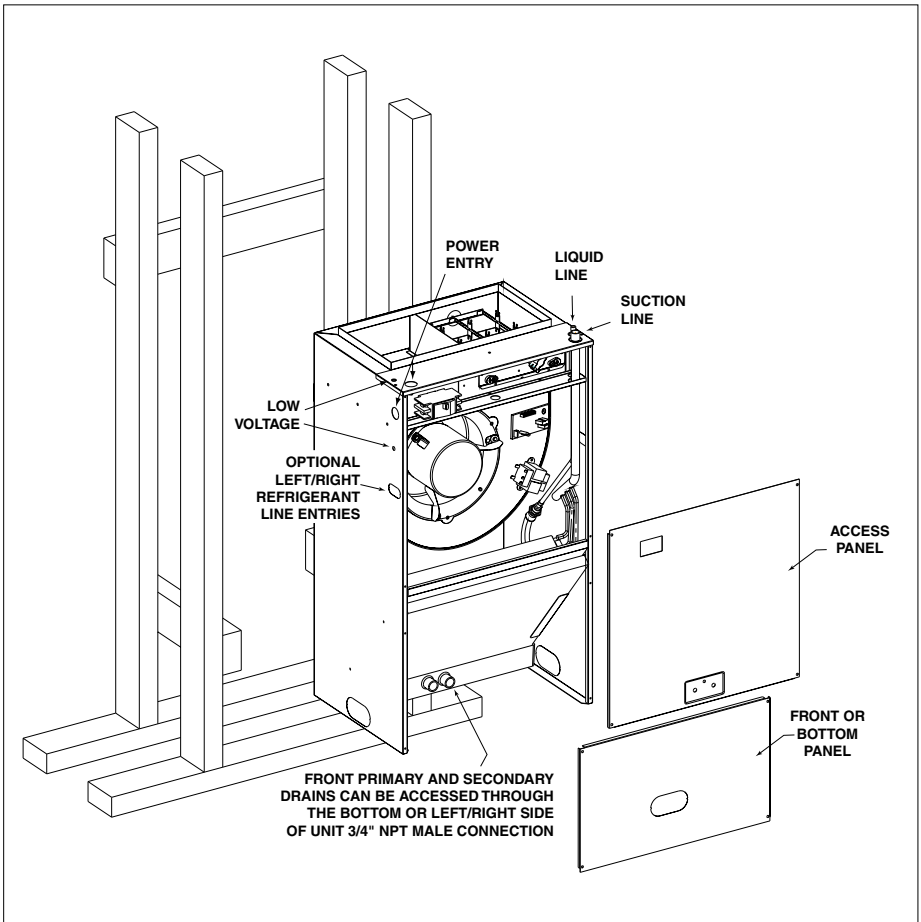


Figure 1.



## 1. INSTALLATION

Units are approved for closet or alcove installation with zero clearance to combustibles. Units are designed to be installed either recessed into a wall or hanging in a vertical “upflow” position. If units are recessed in a wall, attachment to the framing studs are through the inside of the front flange. Air handlers are provided with an offset hanging bracket attached to the rear of the cabinet for hanging applications.

Units have a bottom and/or front return. Units are shipped for installation in a front return application. Front close-off panel (if supplied) may be discarded. If installed in a bottom return application, attach bottom access to the front of the unit below the top service panel or close-off panel.

Units are equipped with primary and secondary drains and both drains must be trapped. Failure to install a trap could result in condensation overflowing the drain pan resulting in substantial water damage to the nearby area.

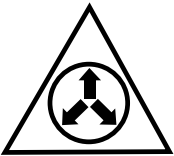
*Note:* If you intend to install this unit with a louvered door the unit must be mounted flush or behind front edge of finished wall.

## 2. VERIFY PRESSURIZATION

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### WARNING:

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NITROGEN	
HEALTH	1
FLAMMABILITY	0
REACTIVITY	0
0 Minimal Hazard 1 Slight Hazard	

**This coil is pressurized with Nitrogen. Avoid direct face exposure or contact with valve when gas is escaping. Always ensure adequate ventilation is present during the depressurization process. Any uncertainties should be addressed before proceeding.**

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### VERIFY PRESSURIZATION:

- Test by depressing Schrader valve and listen for escaping gas
- If no pressure is found, test coil for leak

- If no leak is found, install coil
- If leak is found, clearly mark leak location and return coil to your distributor for processing

## 3. REFRIGERANT LINE CONNECTIONS

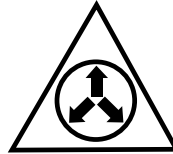
**Note:** Do not remove seals from the coil until tubing connections are ready to be made.

**Note:** The air handler coil does not contain a refrigerant charge. Reference installation instructions included with outdoor unit for information regarding the refrigerant charge included in the outdoor unit.

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### WARNING:

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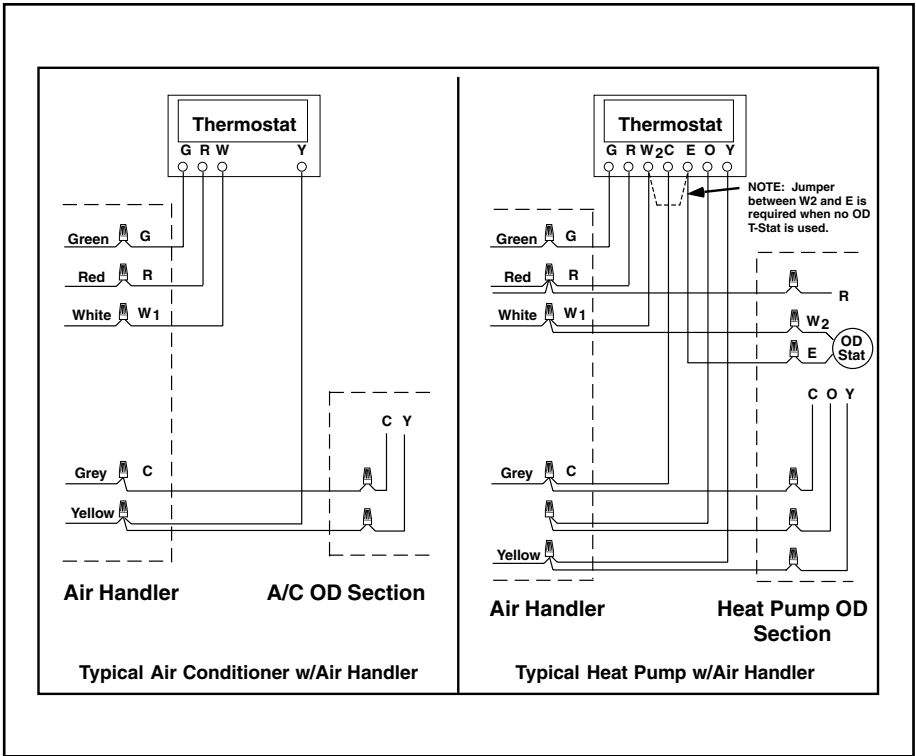


NITROGEN	
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1. Remove cap from Schrader valve on liquid line. Relieve all pressure from the coil by depressing the valve on the end of the liquid line. Remove the valve core. Properly dispose of all removed parts.
2. Loosen the distributor body halves by applying two wrenches and turning the assembly nut counterclockwise.
3. When separated insert a light-gauge wire hook between the distributor body and the restrictor orifice and carefully remove the restrictor orifice being careful not to scratch either part.
4. Insert the new restrictor orifice in the distributor body.
5. After installing the orifice in the distributor body, re-attach the assembly nut to the distributor body and tighten it to 10-12 ft./



**Figure 2. Typical Air Conditioning and Heat Pump System Connections**

6. If not already done so, release pressure from the coil by removing the valve cap and then depressing the valve on the end of the liquid line. Remove the valve core and dispose of properly.
7. Unbraid and remove the cap on the suction line. Unbraid and remove the valve core holder on the liquid line.
8. Cut the line set tubing to the proper length. Be sure that the tubing has been sized in accordance with the outdoor unit specifications.
9. Inspect both refrigerant lines. The ends of the lines must be round, clean, and free of any burrs.
10. Insert the line set tubes into the coil tube stubs until they bottom out.
11. Braze the individual connections with dry nitrogen flowing through the joints to elimi-

12. Check the assembly for leaks.
13. Properly dispose of all removed parts.

**⚠ WARNING:**

**To avoid the risk of electric shock, personal injury or death, disconnect all electrical power to the unit before performing any maintenance or service.**

**4. ELECTRICAL WIRING**

**General** — Electrical power wiring must be made in accordance with all applicable local codes and ordinances, and with the current revision of the National Electric Code (ANSI/NFPA 70). If any of the original wire as supplied with the unit must be replaced, it must be replaced with wire material having the same gauge and temperature rating. Use a separate branch electrical circuit for this unit. See the unit wiring label for proper high and

low voltage wiring.

208/240 volt units are shipped from the factory wired for 240 volt transformer operation. For 208 volt operation, remove the lead from the transformer terminal marked 240v and connect it to the terminal marked 208v.

Provide power supply for the unit in accordance with the unit wiring diagram and the unit rating plate. Use copper wire only for the line voltage power supply to this unit.

Check all factory wiring per the unit wiring diagram and inspect the factory wiring connections to be sure none were loosened in transit or installation.

Some units are equipped with a liquid line solenoid valve. Connect the loose yellow wire to the Y1 thermostat wire as shown in the wiring diagram.

Refer to Figure 2 for typical low voltage system wiring.



## **CAUTION:**

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**Make sure all doors are installed before restoring power to the unit.**

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## **5. START-UP AND ADJUSTMENT**

**Selecting Proper Blower Speed for Multi-Speed Units** — The blower speed is preset at the factory for operation at the same speed for heating and cooling. For optimum system performance and comfort, it may be necessary to change the factory set speed. To change the blower speed, disconnect all electrical power to the unit and remove the upper door. Remove the black wire from the blower motor terminal.

Connect the black wire to the desired blower speed marked on the terminal block of the blower motor. Terminal 5 = Hi speed, terminal 4 = Med Hi speed, terminal 3 = Med speed, terminal 2 = Med Low speed, terminal 1 = Low speed. See Table 1 for airflow data.

Replace the upper door and secure it to the unit. Restore power to the unit.

**Selecting Blower Speed for Fan Only Operation** — Units are equipped with the capability of selectable fan only blower speeds. To change the factory set blower speed, disconnect all electrical power to the unit and remove the upper door. Remove the green wire from the blower motor

terminal. Connect the green wire to the desired blower speed marked on the terminal block of the blower motor. Terminal 5 = Hi speed, terminal 4 = Med Hi speed, terminal 3 = Med speed, terminal 2 = Med low speed, terminal 1 = Low speed.

Replace the upper door and secure it to the unit. Restore power to the unit.

## **6. CARE AND MAINTENANCE**

**General** — For continued high performance, and to minimize the risk of equipment failure, it is essential that periodic maintenance be performed on this equipment. The ability to properly perform maintenance on this equipment requires certain mechanical skills and tools. If you do not possess these skills, contact your dealer for maintenance. Consult your local dealer as to the availability of a maintenance contract.

Do not store any of the following on, or in contact with, the unit: Rags, brooms, vacuum cleaners, or other cleaning tools, spray or aerosol cans, soap powders, bleaches, waxes, cleaning compounds, plastics or plastic containers, paper bags or other paper products, gasoline, kerosene, cigarette lighter fluid, dry cleaning fluids, paint thinners, or other volatile fluids.

Proper maintenance is most important to achieve the best performance from an air handler. At a minimum, this maintenance should include the following items.

1. Inspect and clean or replace the air filter at the beginning of each heating and cooling season, or more frequently as required.
2. Inspect the cooling coil, drain pan, and condensate drain at the beginning of each cooling season for cleanliness. Clean these components as necessary using a mild detergent and water. Flush the coil, drain pan, and condensate drain after cleaning to remove all detergent. Use caution when cleaning these components so that the insulation does not become wet.
3. Inspect the blower motor and wheel for cleanliness at the beginning of each heating and cooling season. Clean the motor as necessary.
4. Inspect electrical connections for tightness at the beginning of each heating and cooling season. Service as necessary.

		Dry Coil ESP	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80
<b>018K/024K</b>	Low	640	597	553	529	492	452	428	388	
	Med-Low	721	691	652	624	584	554	528	487	
	Medium	830	795	760	737	702	666	649	613	
	Med-High	929	906	881	844	817	771	718	663	
	High	1074	1018	975	925	868	811	753	694	

		Dry Coil ESP	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80
<b>030K</b>	Low	596	568	525	481	450	401	357	331	
	Med-Low	689	652	614	587	546	505	474	433	
	Medium	786	746	706	675	629	597	561	530	
	Med-High	885	862	830	804	770	736	709	658	
	High	1153	1110	1061	1011	956	902	837	763	

**Notes:**

- 1) Airflow is shown in cfm, +/- 5%.
- 2) External static pressure is shown in inches w.c.
- 3) All airflows are measured with filter and with dry coil. For wet coil, subtract .1" external static pressure.
- 4) See unit nameplate or installation instructions for maximum recommended external static pressure.

**Figure 1. System Airflow Data**



**INSTALLER: PLEASE LEAVE THESE INSTALLATION  
INSTRUCTIONS WITH THE HOMEOWNER**

**USA**  
DESIGNED &  
ASSEMBLED

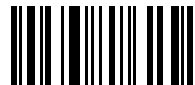


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