COMFORT PACK

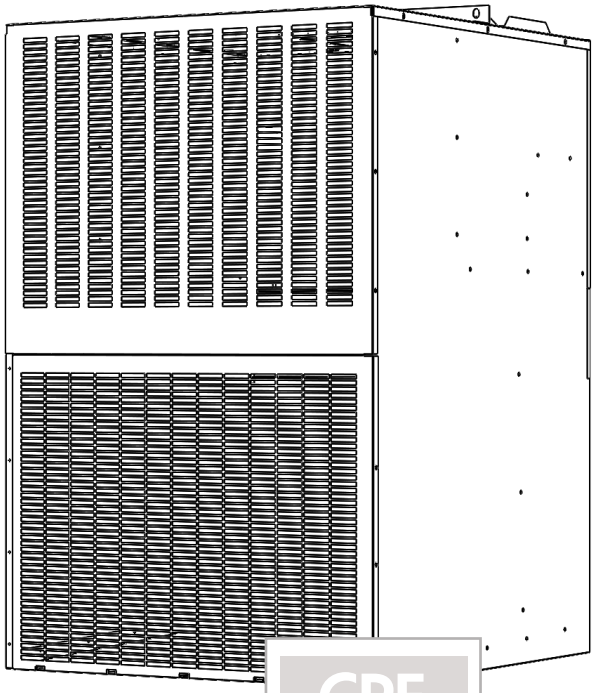
# Thru-the-Wall Comfort

## Heating & Cooling

# Installation Guide

## Comfort Pack Electric Universal

**OPTIONAL ELECTRIC HEAT**



CPE
Universal
R454B

This unit should be installed in an

**Outside Wall For Thru-The-Wall Installation Only!**

Read Installation Manual
Prior To Starting The Installation.

Please fill in the following information and file it for future reference.

MODEL NO._____

SERIAL NO._____

INSTALL DATE _____

This manual must be left with the homeowner for future reference.

AHRI CERTIFIED® www.ahridirectory.org
Unitary Small AC
AHRI Standard 210/240
Certification applies only when the complete system is listed with AHRI.

C ETL LISTED US
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53533

ncp
**National Comfort Products**
*A Division of National Refrigeration and Air Conditioning Products, Inc.*
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*Go Thru-the-Wall*

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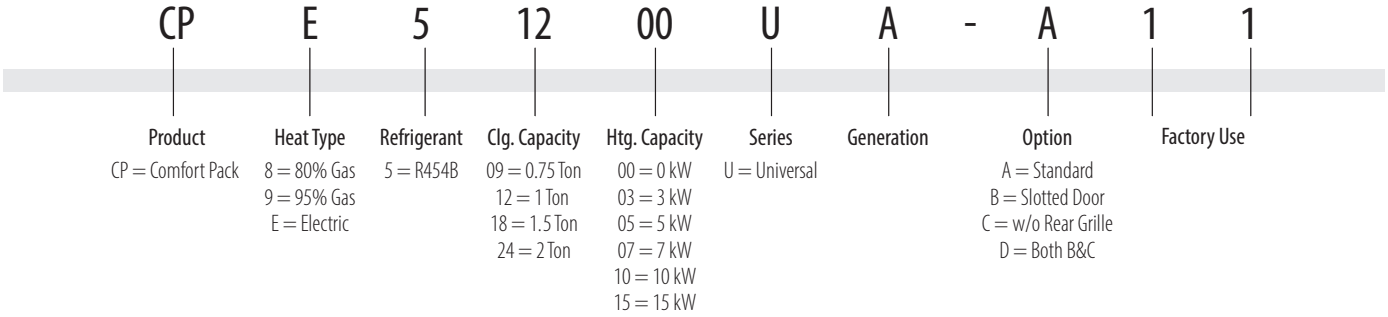
**IMPORTANT NOTE: DO NOT DESTROY OR DISCARD THIS MANUAL.**
**IT SHOULD BE KEPT IN A SAFE PLACE FOR FUTURE REFERENCE.**

## Comfort Pack Nomenclature



## Safety Warnings

This appliance is not intended for use by those (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instructions concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.

This appliance is intended to be installed up to 10,000 ft (3,000 m) above sea level.

This appliance only uses **R454B** refrigerant.


**To be installed without alteration.**

⚠ This is a safety alert symbol. When you see this symbol on labels or in manuals, be alert to the potential for personal injury.

Pay particular attention to words such as **DANGER, WARNING** or **CAUTION**.

**DANGER** indicates an imminently hazardous situation, which will result in **serious injury or death**

**WARNING** indicates a potentially hazardous situation, which could potentially result in **serious injury or death**

**CAUTION** indicates a potentially hazardous situation, which may result in **minor or moderate injury.** It is also used to alert against practices that are unsafe and can result in property damage.

### ⚠ HAZARD INTENSITY LEVELS

1. **DANGER: FAILURE TO COMPLY WITH WILL RESULT IN SEVERE PERSONAL INJURY OR DEATH AND/ OR PROPERTY DAMAGE.**
2. **WARNING: FAILURE TO COMPLY COULD RESULT IN SEVERE PERSONAL INJURY OR DEATH AND/ OR PROPERTY DAMAGE.**
3. **CAUTION: FAILURE TO COMPLY COULD RESULT IN MINOR PERSONAL INJURY AND/OR PROPERTY DAMAGE.**

### ⚠ WARNING

All working personnel for maintenance, service, and repair operations must be certified from a national training organization or manufacturer that is accredited to teach the relevant national competency standards. Attempting to install or repair this unit without such background may results in product damage, personal injury or death.

### ⚠ AVERTISSEMENT

Tout le personnel de travail pour les opérations d'entretien, de service et de réparation doit être certifié par un organisme de formation national ou un fabricant accrédité pour enseigner les normes de compétence nationales pertinentes. Tenter d'installer ou de réparer cette unité sans un tel arrière-plan peut entraîner des dommages au produit, des blessures corporelles ou la mort.

### ⚠ WARNING

**HIGH VOLTAGE!** Disconnect ALL power before servicing. Multiple power sources may be present. Failure to do so may result in property damage, personal injury or death.

### ⚠ AVERTISSEMENT

**HAUTE TENSION!** Débranchez TOUTE l'alimentation avant l'entretien. Plusieurs sources d'alimentation peuvent être présentes. Le non-respect de cette consigne peut entraîner des dommages matériels, des blessures corporelles ou la mort.

### ⚠ CAUTION

Use care when handling compressors. Some temperatures could be hot!

### ⚠ PRUDENCE

Faites attention lorsque vous manipulez des compresseurs. Quelques températures pourrait être chaud !

### ⚠ CAUTION

Compressors should NEVER be used to evacuate the air conditioning system. Vacuums this low can cause internal electrical arcing resulting in a damaged or failed compressor.

### ⚠ PRUDENCE

Les compresseurs à spirale ne doivent JAMAIS être utilisés pour évacuer le système de climatisation. Des vides aussi bas peuvent provoquer un arc électrique interne entraînant un compresseur endommagé ou défaillant.

**⚠ WARNING**

The unit must be permanently grounded. **Failure to do so can cause electrical shock resulting in severe personal injury or death.**

**⚠ AVERTISSEMENT**

L'unité doit être mise à la terre en permanence. **Le défaut de le faire peut provoquer un choc électrique entraînant des blessures graves ou la mort.**

**"USE COPPER SUPPLY WIRES ONLY"**

**⚠ WARNING**

For your safety, do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance. Such actions could result in property damage, personal injury, or death.

**⚠ AVERTISSEMENT**

Pour votre sécurité, n'entreposez ni n'utilisez pas d'essence ou d'autres vapeurs et liquides inflammables à proximité de cet appareil ou de tout autre appareil. De telles actions pourraient entraîner des dommages matériels, des blessures corporelles ou la mort.

**⚠ CAUTION**

These units are not approved for mobile home applications. Such use could result in property damage, personal injury, or death.

**⚠ PRUDENCE**

Ces unités ne sont pas approuvées pour les applications de maison mobile. Une telle utilisation pourrait entraîner des dommages matériels, des blessures corporelles ou la mort.

**⚠ WARNING**

These instructions are intended as an aid to qualified, licensed service personnel for proper installation, adjustment and operation of this unit. Read these instructions thoroughly before attempting installation or operation. Failure to follow these instructions may result in improper installation, adjustment, service or maintenance possibly resulting in fire, electrical shock, property damage, personal injury or death.

**⚠ AVERTISSEMENT**

Ces instructions sont destinées à aider le personnel de service qualifié et autorisé pour l'installation, le réglage et le fonctionnement appropriés de cette unité. Lisez attentivement ces instructions avant de tenter l'installation ou l'opération. Le non-respect de ces instructions peut entraîner une installation, un ajustement, un entretien ou un entretien inappropriés pouvant entraîner un incendie, un choc électrique, des dommages matériels, des blessures corporelles ou la mort.

**⚠ WARNING**

Do not use oxygen to purge lines or pressurize system for leak test. Oxygen reacts violently with oil, which can cause an explosion resulting in severe personal injury or death.

**⚠ AVERTISSEMENT**

N'utilisez pas d'oxygène pour purger les conduites ou pressuriser le système pour l'essai d'étanchéité. L'oxygène réagit violemment avec l'huile, ce qui peut provoquer une explosion entraînant de graves blessures corporelles ou la mort.

**⚠ WARNING**

Do not use means to accelerate the defrosting process or to clean, other than those recommended by the manufacturer.

The appliance shall be stored in a room without continuously operating ignition sources (for example:open flames, an operating gas appliance or an operating electric heater.

Do not pierce or burn.

Be aware that refrigerants may not contain an odor.

**⚠ AVERTISSEMENT**

Nutilisez pas de moyens pour accélérer le processus de dégivrage ou pour nettoyer, autres que ceux recommandés par le fabricant.

Lappareil doit être stocké dans une pièce sans sources dinflammation fonctionnant en continu (par exemple : flammes nues, un appareil à gaz en fonctionnement ou un radiateur électrique en fonctionnement.

Ne pas percer ou brûler.

Sachez que les réfrigérants peuvent ne pas contenir dodeur.

## Optional Heat Kit Operation

The optional heat kit (CPEHK) includes open-wire resistance heating elements with automatic reset thermal overloads, as well as branch circuit breakers for short-circuit and electrical overload protection.

The Comfort Pack with CPEHK is designed to be used with residential single-stage cooling two-stage heating wall thermostats with automatic or manual mode changeover. Automatic changeover thermostats must include a deadband to prevent cycling between cooling and heating modes. **Single-pole, single-throw thermostats are not suitable for use with Comfort Packs installed with optional Heat Kits.** The unit also contains controls to automatically adjust the indoor blower motor speed for cooling and heating modes.

Each heat kit contains 2 electrical heat banks with the exception of the 15kW model which has 3 banks:

**APPROXIMATE COLD RESISTANCE**

| | | |
|---|---|---|
| 3kW | 2 Banks | 30.4 ohms per bank |
| 5kW | 2 Banks | 20.8 ohms per bank |
| 7kW | 2 Banks | 14.81 ohms per bank |
| 10kW | 2 Banks | 10.4 ohms per bank |
| 15kW | 3 Banks | 10.4 ohms per bank |

When a call for heat is active sending power to the W1 and W2 heating terminals on the control board, the board will begin to sequence the heating outputs to energize the heat contactors. Once W1 is energized the board will sequence output W1A after a 3 second delay and W1B after a 28 second delay. Once W2 is energized the board will sequence out W2 after a 45 second delay. Once W1, W2, or G is energized the fan will be operated. Once de-energized the fan will run for an additional 5 seconds.

**Faults**
If multiple inputs are received with a cooling input (Y) than the board will automatically fault and run in cooling.

**Cooling Blower Operation**
Cooling fan will delay 5 seconds on a call for cooling and will delay off when a call is terminated for the duration of the board jumper set point. (A = 5 sec., B = 30 sec., C = 60 sec., & D = 90 sec.)

## Before You Start

This unit is shipped with a cooling chassis installed in the cabinet. Prior to installing the unit in the wall opening, the shipping bolts located at the bottom on both sides of the cabinet must be removed to allow for removal of the cooling chassis. 1/4" hole plugs provided with the unit should be installed in the holes to prevent air leakage. Shipping bolts are located on both sides below this sticker:

**THE SHIPPING BOLTS MUST BE REMOVED PRIOR TO INSTALLATION OF THE CABINET TO PERMIT REMOVAL OF THE CHASSIS. INSTALL THE HOLE PLUGS PROVIDED.**

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**This unit is designed and approved for through-the-wall installation only. The unit must be installed a minimum of 8" above finish floor. If this unit is installed in a residential garage, it must be installed so that the ignition source and burners are located not less than 18 inches (457 mm) above the floor, and it must be located or protected to avoid physical damage by vehicles. The entire unit must not be installed outside.** The grille side of the unit should extend 3/4" beyond the exterior wall to allow moisture that may enter the outdoor section to drain. The pitch of the internal drain pans toward the outside will assure proper drainage when the cabinet is installed level. **Masonry walls must have a lintel to support the wall.**

The interior of the unit may be installed with zero clearances to adjacent combustible surfaces. **The unit shall not be installed directly on carpeting, tile or other combustible material, except wood flooring.** In order to be able to remove the chassis, 29" of open area must be left unobstructed in front of the access panels. The 3/4" O.D. drain pan connection should be connected to the building drain using the flexible tubing included and a trap. The secondary drain offers protection from overflow.

The secondary drain feature is piped into the base of the unit and drains through the weep holes outside. Reconnect 3" piece of clear flexible tubing to secondary drain on drain pan. Position secondary drain through grommet of chassis and connect to flexible tubing (prime trap prior to operating).

The grille side must be kept free of any obstructions that will reduce or alter the air flow pattern.

If an optional architectural grille is to be used on standard units, the stamped grille provided **must** be removed. Consult the factory prior to ordering product(s) that require an optional architectural grille.

The area shall be checked with an appropriate refrigerant detector prior to and during work, to ensure the technician is aware of potentially toxic or flammable atmospheres. Ensure that the leak detection equipment being used is suitable for use with all applicable refrigerants, i.e. non-sparking, adequately sealed or intrinsically safe.

Appropriate leak detection methods include an electronic leak detection device or liquid soap bubble method on chassis weld joints.

### ⚠ CAUTION

The installation of this appliance must conform to the requirements of the National Fire Protection Association; the National Electric Code, ANSI/NFPA No. 70 (latest edition) in the United States; the Canadian Electrical Code Part 1, CSA 22.1 (latest edition) in Canada; and any state or provincial laws or local ordinances. Local authorities having jurisdiction should be consulted before installation is made. Such applicable regulations or requirements take precedence over the general instructions in the manual.

### ⚠ PRUDENCE

L'installation de cet appareil doit être conforme aux exigences de la national fire protection association ; The National Electric Code, ANSI/NFPA no. 70 (Dernière édition) aux États-Unis ; la partie 1 du code Canadien de l'électricité, lmmc 22.1 (Le plus récent Édition) au Canada; et toutes les lois étatiques ou provinciales ou les ordonnances locales. Les autorités locales compétentes devraient être consultées avant l'installation. De tels règlements ou exigences applicables prennent préséance sur l'instruction générale.

**To remove the chassis from the cabinet:**

Turn off power to the unit. Remove the two lower access panels from the cabinet. Disconnect the drain line from the evaporator coil drain connection. Disconnect the secondary drain flexible tubing & trap to avoid damage (prime trap when reinstalling). Depress and hold the release latch on the chassis power wiring connector and unplug it from the cabinet power wiring connector.

Depress and hold the release latch on the control wiring connector and unplug it from the cabinet control wiring connector. Unfasten the screws attaching the indoor blower cover plate and remove it from the unit. Temporarily secure the chassis power and control wiring and connectors to the top of the indoor coil cover to prevent damage during chassis removal.

Carefully slide the chassis out of the cabinet by grasping both sides of the evaporator coil drain pan and pulling toward you while keeping the chassis centered in the cabinet. As the chassis is removed, keep the chassis level until the outdoor fan cover passes the cabinet seals. **Damage to the cabinet seals will result if the chassis is not kept level until the outdoor fan cover has passed the cabinet seals**. After the chassis is removed, it should be handled using the chassis base and evaporator drain pan, not by using refrigerant piping or the outdoor fan mount. The bottom of the chassis is not smooth and will damage floors if slid.

**To install the chassis into the cabinet:**

**Turn off power to the unit.** Temporarily secure the chassis power and control wiring and turn off power to the unit. Temporarily secure the chassis power and control wiring and connectors to the top of the indoor coil cover to prevent damage during chassis installation. Place the outdoor coil section of the chassis onto the cabinet rails. Lift the rear of the chassis using the evaporator coil drain pan so that the chassis is level and centered as it is pushed in the cabinet. **Damage to the cabinet seals will result if the chassis is not kept level until the outdoor fan cover has passed the cabinet seals, and if the chassis is not kept centered in the cabinet.** After the chassis is all the way in the cabinet, check that the chassis is centered in the cabinet by verifying that it is in contact with the cabinet seals on both sides.

Install the indoor blower cover plate and secure it with screws. Install the chassis power wire connector and the control wiring connector into their respective cabinet wiring connectors so that the connectors latch. Connect the drain line to the evaporator coil drain connection. Reconnect 3" piece of clear flexible tubing to secondary drain on drain pan. Position secondary drain through grommet of chassis and connect to flexible tubing (prime trap prior to operating). Install the lower access panel on the cabinet. Turn on power to the unit.

**ALL phases of this installation must comply with NATIONAL, STATE AND LOCAL CODES. The manufacturer assumes no responsibility for equipment installed in violation of any code requirements.**

**Be sure that the electrical data specified on the unit rating plate corresponds to what is available at the installation site and NEC for installation requirements.**

**This unit MUST be installed in an outside wall for thru-the-wall installation ONLY.**

**Be sure that the electrical service provided to the building can handle the load imposed by the unit.**

**IMPORTANT — This Document is customer property and is to remain with this unit. Please refer to service information pack upon completion of work to register the unit's warranty. These instructions do not cover all variations in systems or provide for every possible contingency to be met in connection with the installation. Should further information be desired or should particular problems arise which are not covered sufficiently for the purchaser's purposes, the matter should be referred to your installing dealer or local distributor before contacting the manufacture.**

**Note:** The unit must never be placed on its side or upside down as the compressor oil will run in the cooling circuit and seriously damage the unit.

## Installation

**⚠ WARNING**

The area where the appliances is installed shall be constructed that should any refrigerant leak, it will not stagnate so as to create a fire or explosion hazard.

Auxiliary devices which may be a potential ignition source shall not be installed in the duct work. Examples of such potential ignition sources are hot surfaces with a temperature exceeding 1292°F (700°C) and electric switching devices.

**⚠ AVERTISSEMENT**

La zone où les appareils sont installés doit être construite de manière à ce qu'en cas de fuite de réfrigérant, il ne stagne pas de manière à créer un risque d'incendie ou d'explosion.

Les dispositifs auxiliaires qui peuvent être une source d'inflammation potentielle ne doivent pas être installés dans les conduits. Des exemples de telles sources d'inflammation potentielles sont les surfaces chaudes avec une température supérieure à 1292°F (700°C) et les dispositifs de commutation électrique.

**Note:** Installation and maintenance instructions should be left with the unit for future reference.

This unit must be installed in accordance with all applicable codes. This unit is not to be used for temporary heating or cooling of buildings or structures under construction.

**FOR MAXIMUM PERFORMANCE, IT IS IMPERATIVE THAT THE COOLING CHASSIS AIR DIVIDER BE SEALED TO THE CABINET AIR SEAL. ANY LEAKAGE WILL ALLOW OUTSIDE UNCONDITIONED AIR TO INFILTRATE AND MIX WITH THE CONDITIONED AIR. THIS CONDITION WILL DEGRADE UNIT PERFORMANCE. ALL UNITS SHOULD BE INSPECTED FOR THIS CONDITION, AS DURING TRANSPORTATION AND INSTALLATION THE SEALS CAN BE DISTURBED. IF REQUIRED, A LIGHT BEAD OF CAULKING IS RECOMMENDED TO SEAL THE CHASSIS TO THE AIR SEAL TO ELIMINATE LEAKAGE.**

**OUTSIDE UNCONDITIONED AIR MUST NOT BE INTRODUCED INTO THE RETURN AIR STREAM OF THIS UNIT IF THE MIXED AIR TEMPERATURE FALLS BELOW 55°F IN HEATING MODE AT DESIGN CONDITIONS. THIS CONDITION MAY ALSO DEGRADE THE PERFORMANCE OF THE UNIT AND IMPROPER APPLICATIONS COULD VOID EQUIPMENT WARRANTY.**

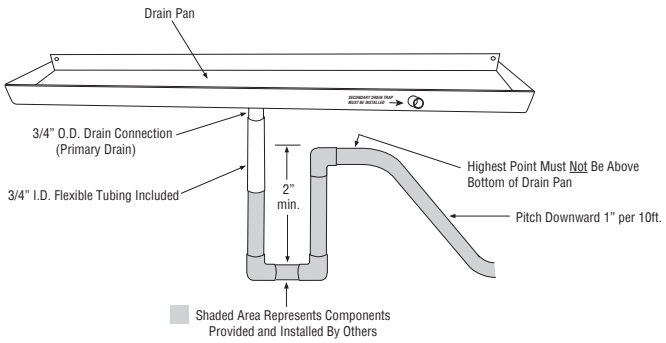
The unit must be installed through an exterior wall with the back end extending 3/4" past the outside wall surface. Provide support inside the building for the unit near the return air opening. There should be enough clearance around the supports to route return ductwork to the unit or allow for unrestricted airflow in an open return configuration. To reduce the possibletransmission of sound and vibration, a resilient material such as rubber or cork should be installed between the support and the base of the unit. All spaces around the top, sides, and bottom of the exterior grille area should be caulked and sealed to the wall, making sure that the openings for drainage in the bottom edge are not blocked.

If the optional wall sleeve is used, caulk the spaces between the sleeve and the wall. Completely fill the clearance on all sides between the unit and the wall sleeve with a polyurethane foam sealant (follow manufacturer's suggested application manual).

**Note:** For ease of installation, install the cabinet into the wall sleeve first without the cooling chassis. Then slide cooling chassis in after cabinet is in place.

## Drainage

The 3/4" I.D. flexible tubing included should be connected to the Comfort Pack primary drain connection so that it can easily be disconnected if the cooling chassis must be removed. A trap at least 2" deep should be provided close to the drain pan. The tubing should not be higher than the bottom of the unit drain pan at any point to assure proper drainage and allow chassis removal. The drain line should pitch downward at least 1" per 10 ft. to an open building drain trap.




## Secondary Drain Trap Install Instructions:

**1.** The trap and 2" piece of clear flexible 1/2" ID tubing are shipped loose to prevent damage. They should be installed after the Comfort Pack unit is installed and the return air connection completed.

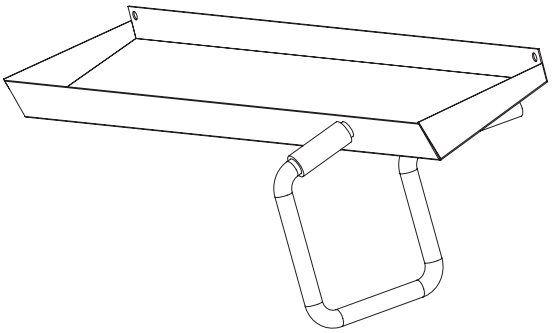
**2.** The trap must be primed (filled with water) for proper operation of the secondary drain system. This may be done prior to installation of the trap or after.

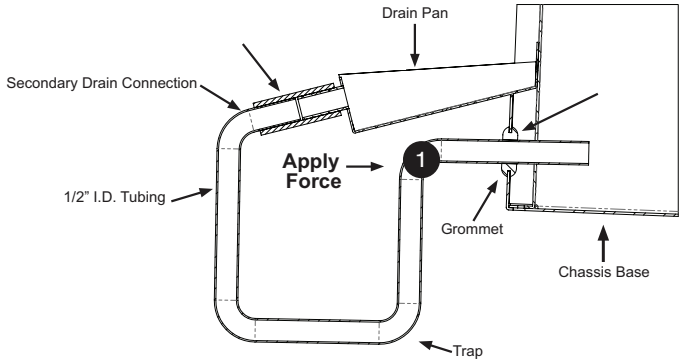
**3.** Insert trap into the grommet located in chassis base pan.

a. Apply force to section 1 (refer to drawing below)

b. Ensure at least .5" - 0.75" of tubing is inserted into the grommet

c. PVC should be flush with drain pan connection



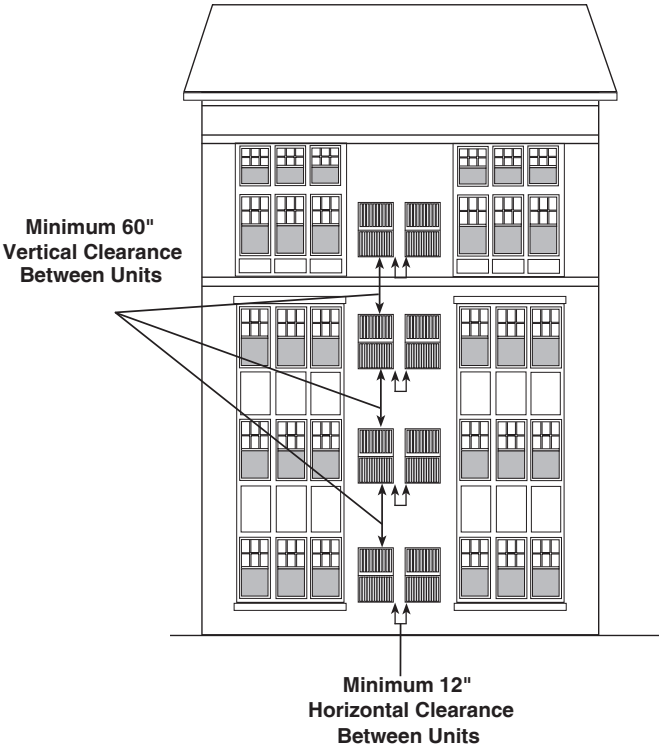



**4.** Position the trap as shown and slide the 2" piece of clear flexible tubing about 1" onto the top end of the trap. Slide the top of the flexible tube on the trap onto the bottom of the 1/2"OD secondary drain connection and push the top of the trap up. The trap should be positioned so that there is only a small gap between the top of the trap and the bottom of the secondary drain connection.

**5.** To avoid damage whenever the slide-out chassis has to be removed from the cabinet, remove the secondary drain trap before sliding the chassis out. After the chassis is reinstalled in the cabinet, prime the trap with water before reinstalling it.

## Clearances

For proper unit performance and maximum operating life please maintain the following minimum installation clearances.




*Less than 12" Call National Comfort Products

**Comfort Pack** units must be installed through an outside wall. Confined spaces and/or covered areas should be avoided. Consult the factory if unclear of clearances required. Units must be installed a minimum of **12"** apart when two units are side by side. If three or more units are to operate next to one another, allow a minimum of **60"** between units or pairs of units. Also, a vertical clearance of **60"** should be maintained between units. Units installed on the bottom floor should be mounted at least **8"** off of the ground.

The unit is designed and approved for thru the wall installation only. The unit must be installed a minimum of **8"** above a finished floor. If the unit is installed in a residential garage, it must be installed so that the ignition source and burners are located not less than **18"** above the floor, and it must be located or protected to avoid physical damage by vehicles.

## Unit Location Considerations

In thru-the-wall installation, due to the various types of wall construction, it is not possible to provide detailed instructions. The following is a list of general requirements and cautions for installing these units.

**The unit must be installed level, both - top front to back and left to right.**

**1.** Masonry walls must have a lintel to support the wall.

**2.** Extend the unit approximately 3/4" beyond outside surface of the wall. Optional mounting angles can be purchased from the factory or field fabricated for locating and mounting the unit in the wall.

**3.** The wall opening across the top and bottom must be flashed.

a. During periods of rain and wind the primary drainage path may not be adequate to handle the load. Secondary precautions may also be required but not limited to the following:

- Seal flashing to unit
- Floor drain
- Additional field sealing of sheet metal joints
- Sealing of unused access opening

**4.** Clearances to air inlets and outlets must be adequate to ensure no air flow obstructions or recirculation of condenser air flow.

**5.** Some architectural designs of buildings will require the unit to be mounted behind a decorative grille. The performance (capacity and efficiency) of the unit may be reduced with the use of these decorative grilles. The less resistive these grilles are to air flow, the better the units performance will be. Outdoor louvers provided by others must be approved by NCP to maintain unit performance and warranty. **Care must be taken to locate the condenser coil away from loose debris that may clog intake.**

**6.** If the unit is mounted behind a decorative grille, one or both of the following items must be done to eliminate recirculation of air to the unit:

a. The front of the unit must be mounted tight to the inside of the architectural grille

b. A barrier must be provided to prevent recirculation of air to the unit (mixing of inlet and outlet air) when the front of the unit is mounted back from the inside of the architectural grille

**7**. The unit must not be mounted in dead-end hallways or areas where there is no fresh outside air circulation. Cool fresh outside air must be provided for best unit operation. Thru-the-wall units may not be located where hot exhausts from clothes dryer vents, kitchen vents, steam vents or corrosive fumes could come in contact with coil side of unit.

**8.** 30" clearance is required for service accessibility on the inside service panel.

**9.** If more than one unit is to be installed in the same area a min. of 60" vertical must be maintained between units to minimize recirculation of condenser exhaust air.

**10.** Care must be taken when locating the unit. Locate away from bedrooms as operational sounds may be objectionable.

## Electrical

**All wiring must be installed in accordance with applicable codes.**

The unit is factory wired for 230/1/60 power. For 208/1/60 power systems, the wiring to the primary side of the control transformer should be changed from the 240-volt connection to the 208-volt connection to provide proper operation of the control system.

**The operating voltage of the unit is from 196 to 244 volts. Operating the equipment outside of these limits will void the warranty.**

## Electrical Supply and Connections

All electrical wiring and connections, including electrical grounding must be made in accordance with the National Electric Code ANSI/NFPA No. 70 (latest edition) or, in Canada, the Canadian Electrical Code, Part I-C.S.A. Standard C22.1. In addition, the installer should be aware of any local ordinances or utility company requirements that might apply.

Check the rating plate for the supply voltage and current requirements. A dedicated line voltage supply with fused disconnect switch should be run directly from the main electrical panel to the unit. All external wiring must be within approved conduit and have a minimum temperature rise rating of 60°C. Conduit from the disconnect switch must be run so as not to interfere with the service panels.

## Controls

Field wiring between the unit and the wall thermostat (by others) may be low voltage for Class 2 systems. The location of the wall thermostat should be 4 to 5 feet above the floor and carefully selected so that the thermostat senses the temperature of the largest conditioned area, without being influenced by drafts, sun exposure or outside temperature.

**Note:** Make certain that the volts, hertz, and phase correspond to that specified on the unit r*ating plate, and that the service provided by the utility is sufficie*nt to handle the additional load imposed by this equipment.

## Electrical Connections

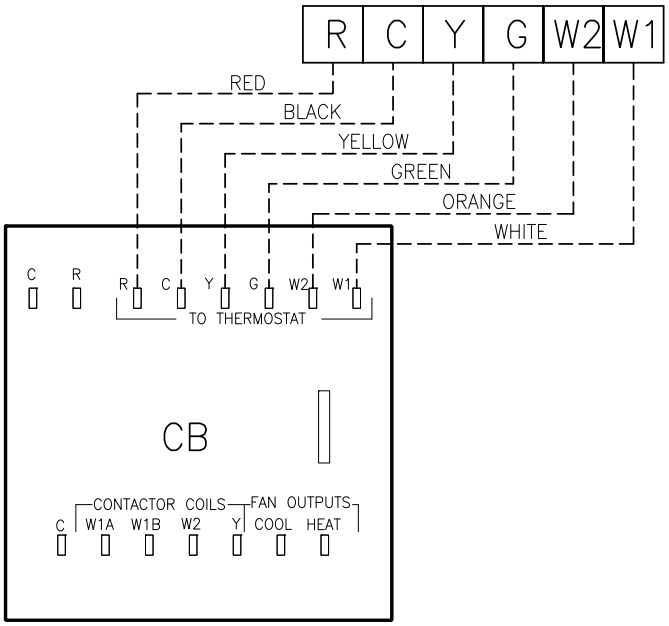
Make all electrical connections in accordance with the National Electrical Code and any pertinent local codes or ordinances. Use a separate branch electrical circuit for this unit. Locate a disconnecting means within sight of and readily accessible to the unit.

a. Line Voltage Connections
b. Connect the single phase power supply to unit fuse blower terminal L1 and L2
c. Connect ground wire to lug
d. Low Voltage Connections

When locating the room thermostat, it should be in the natural circulating path of room air. Avoid locations where the thermostat would be exposed to cold air infiltration; drafts from windows, doors or other openings leading to the outside; exposure to air currents from warm-or-cold air registers or to exposure where the natural circulation of the air is cut off, such as behind doors, above or below mantels, shelves, etc.

## Electrical - Low Voltage

### Thermostat Connections Models




**Note:** If a 2 stage thermostat is not used connect both white(w1) and orange(w2) wires together.
These wires are only needed on Comfort Packs installed with CPEHK

## Electrical - High Voltage

| NOMINAL VOLTAGE | MINIMUM VOLTAGE | MAXIMUM VOLTAGE |
|---|---|---|
| **208-230** | **196** | **244** |

## High Voltage Power Supply

**⚠ WARNING**

**LIVE ELECTRICAL COMPONENTS!**

During installation, testing, servicing and troubleshooting of this product, it may be necessary to work with live electrical components. Failure to follow all electrical safety precautions when exposed to live electrical components could result in death or serious injury.

**⚠ AVERTISSEMENT**

**COMPOSANTS ÉLECTRIQUES EN DIRECT !**

Lors de l'installation, des tests, de l'entretien et du dépannage de ce produit, il peut être nécessaire de travailler avec des composants électriques en direct. Non-respect de tous les appareils électriquesles précautions de sécurité en cas d'exposition à des composants électriques sous jour pourraient entraîner la mort ou des blessures graves.

The high voltage power supply must agree with the equipment nameplate.

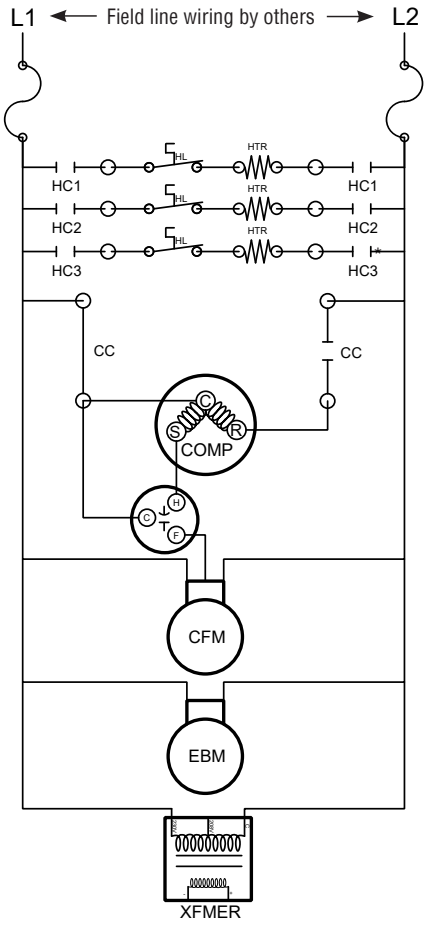
*OR*

Make certain that the volts, hertz, and phase correspond to that specified on the unit rating plate, and that the service provided by the utility is sufficient to handle the additional load imposed by this equipment.

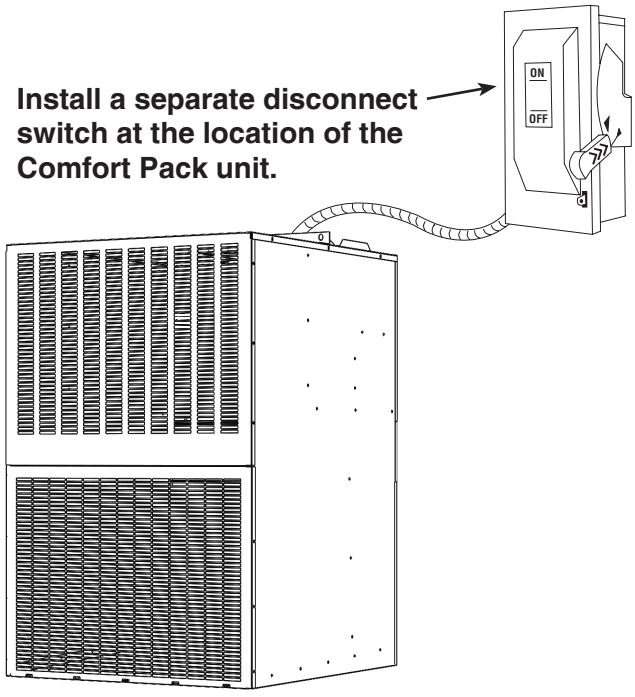
Power wiring must comply with national, state, and local codes.

Follow instructions on unit wiring diagram located on the inside of the access door and in the wiring diagrams included with the unit.

## Wiring Schematic / Optional Electric Heat 3, 5, 7, 10 & 15kW

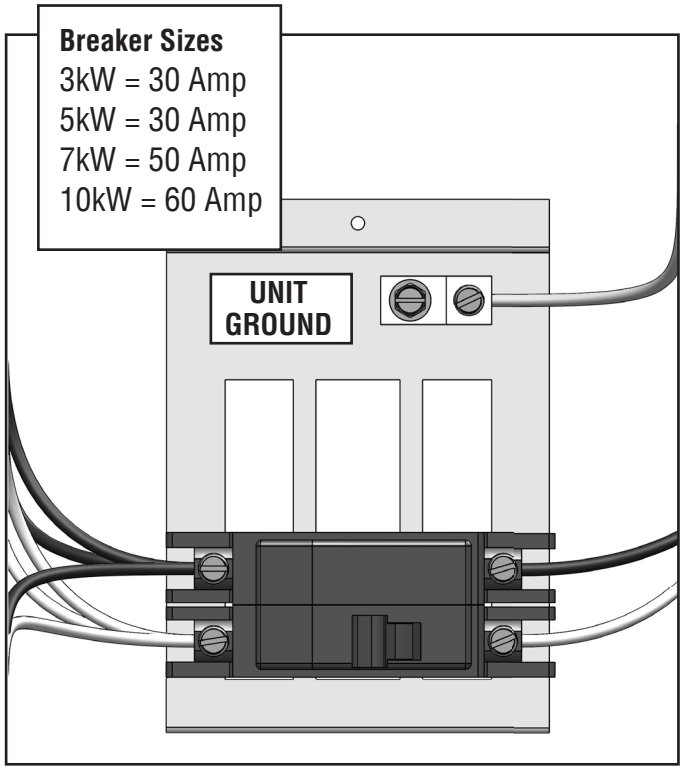



**Install a separate disconnect switch at the location of the Comfort Pack unit.**

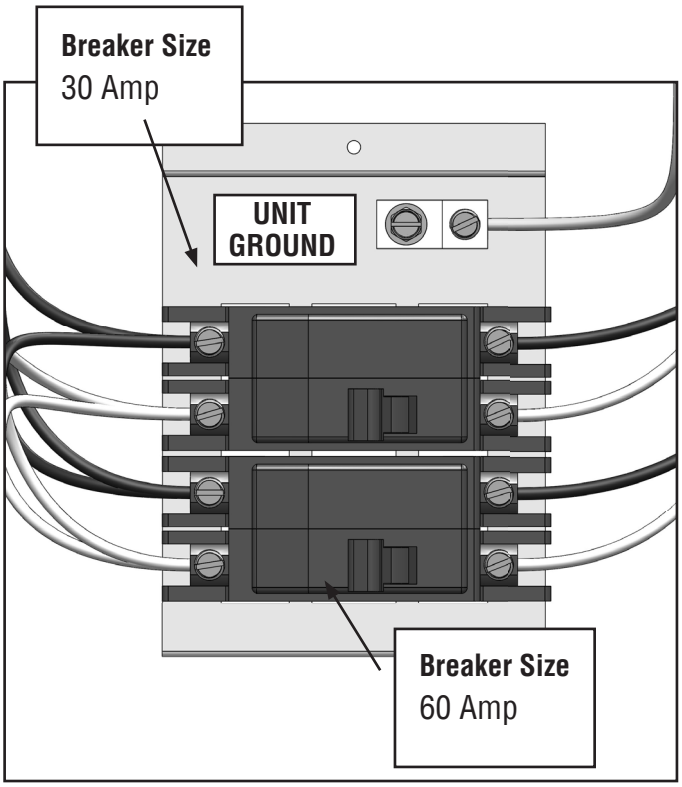


## High Voltage Diagram

### 3, 5, 7, 10kW Fuse Box




### 15kW Fuse Box




## Maintenance and Service

At all times, NCP maintenance and service guidelines shall be followed. If in doubt, consult NCP's technical department for assistance.

The following safety checks must be performed prior to conducting work on the system to minimize the risk of ignition of the refrigerant:

**1.** Work shall be undertaken under a controlled procedure so as to minimize the risk of a flammable gas or vapor being present while the work is being performed.

**2.** All maintenance staff and others working in the local area shall be instructed on the nature of work being carried out. Work in confined spaces shall be avoided.

**3.** The area shall be checked with an appropriate refrigerant detector prior to and during work, to ensure the technician is aware of potentially toxic or flammable atmospheres. Ensure that the leak detection equipment being used is suitable for use with all applicable refrigerants, i.e. non-sparking, adequately sealed or intrinsically safe.

**4.** If any hot work is to be conducted on the refrigerating equipment or any associated parts, appropriate fire extinguishing equipment shall be available to hand. Have a dry powder or CO2 fire extinguisher adjacent to the charging area.

**5.** No person carrying out work in relation to a REFRIGERATING SYSTEM which involves exposing any pipe work shall use any sources of ignition in such a manner that it may lead to the risk of fire or explosion. All possible ignition sources, including cigarette smoking, should be kept sufficiently far away from the site of installation, repairing, removing and disposal, during which refrigerant can possibly be released to the surrounding space. Prior to work taking place, the area around the equipment is to be surveyed to make sure that there are no flammable hazards or ignition risks. "No Smoking" signs shall be displayed.

**6.** Ensure that the area is in the open or that it is adequately ventilated before breaking into the system or conducting any hot work. A degree of ventilation shall continue during the period that the work is carried out. The ventilation should safely disperse any released refrigerant and preferably expel it externally into the atmosphere.

**7.** The following safety checks must be performed prior to conducting work on the refrigerating equipment

a. The actual REFRIGERANT CHARGE is in accordance with the room size within which the refrigerant containing parts are installed.
b. The ventilation machinery and outlets are operating adequately and are not obstructed.
c. Marking to the equipment continues to be visible and legible. Markings and signs that are illegible shall be corrected or replaced.
d. Refrigerating pipe or components are installed in a position where they are unlikely to be exposed to any substance which may corrode refrigerant containing components, unless the components are constructed of materials which are inherently resistant to being corroded or are suitably protected against being so corroded.

**8.** The following safety checks must be performed prior to conducting electrical work on the system to minimize the risk of ignition and electrocution.

a. Capacitors are discharged: this shall be done in a safe manner to avoid possibility of sparking.
b. No live electrical components and wiring are exposed while charging, recovering or purging the system.
c. Ensure there is continuity of earth bonding.

**9.** Sealed electrical components shall be replaced.

**10.** Intrinsically safe components must be replaced.

The 16" x 25" x 1" filter on the cooling chassis must be maintained regularly to assure that the unit provides optimal performance and energy efficiency. The intervals between replacing depends entirely on the cleanliness of the return air to the unit and the time that the indoor blower operates. The air filter is accessible by removing the lower access panel. The filter should be inspected and replaced as needed and is not washable. Substituting the air filter with media other than the type provided with the unit is not recommended, since other materials may cause additional static pressure, which could reduce the air delivery of the unit. **The unit should never be operated without the air filter and access panels in place**.

### Cooling Chassis

The cooling chassis contains all items related to the cooling functions of the unit, and also contains the indoor blower and motor for the heating function. For extensive servicing, qualified personnel may choose to remove the cooling chassis from the unit and take it to a work area. Spare chassis are recommended so that extensive servicing can be performed outside the living space. This will prevent introducing dirt or doing damage in the living area, and could help to eliminate significant disruption of the air conditioning and heating functions in the living areas.

Inspect wires are not subject to wear, corrosion, excessive pressure, vibration, sharp edges or any other adverse environmental effects. Take into account the effects of aging or continual vibration from sources such as compressors or fans. Replace damaged wiring

The indoor blower motor and the outdoor fan motor have permanently lubricated bearings and do not require routine service. The refrigeration system s sealed and factory charged with R454B so that routine maintenance is not required. The electrical controls do not require routine service. Cleaning of the outdoor coil, indoor coil, drain pan, and inside the bottom of the chassis are recommended at least once a year, and more often if the equipment is operated in a dusty or hostile environment. The outdoor coil is an aluminum microchannel condensing coil with an anti-corrosion coating that requires specific precaution when cleaning. It is recommended to rinse the coil using a low pressure hose (less than 70 psi) to prevent buildup of dirt and debris. Rinse from the outside of the coil in, making sure to protect the condenser motor from water damage during the cleaning process. Leaves, twigs, and other large debris should be removed with a soft, non-metallic bristle brush prior to rinsing of the coil to prevent debris from being forced between the fins. Care should be taken not to use the brush horizontally across the fins as they are easily damaged.

**DO NOT USE CHEMICALS, HOUSEHOLD BLEACH, OR ACID CLEANERS AS THEY WILL ACCELERATE CORROSION ON THE COIL. AVOID USING PRESSURE WASHERS, HIGH PRESSURE HOSES, OR HIGHLY COMPRESSED AIR TO CLEAN THE COIL. DOING SO CAN PERMANENTLY DAMAGE THE COIL, REDUCE UNIT PERFORMANCE, AND VOID THE WARRANTY.**

**Power to the unit should always be turned off before performing service or removing the cooling chassis from the unit**. One power connector and one control circuit connector are provided for easy disconnecting and re-connecting of the wires between the cooling chassis and cabinet. The controls enclosure cover must be removed to allow access to the screws holding the indoor blower cover plate to the cooling chassis and cabinet. **After reinstalling the cooling chassis the indoor blower cover plate and controls enclosure cover must be reinstalled**.

If chassis needs replacement, the chassis must be decommissioned properly. When removing refrigerant from a system, it is recommended good practice that all refrigerants are removed safely. The following steps shall be adhered to properly decommission chassis.

**1.** Become familiar with the equipment and its operation.

**2.** Isolate system electrically.

**3.** Before attempting the procedure, ensure that:

a. Mechanical handling equipment is available, if required, for handling refrigerant cylinders;
b. All personal protective equipment is available and being used correctly;
c. The recovery process is supervised at all times by a competent person;
d. Recovery equipment and cylinders conform to the appropriate standards.

**Note:** When transferring refrigerant into cylinders, ensure that only appropriate refrigerant recovery cylinders are employed. Recovery equipment shall be in good working order with a set of instructions concerning the equipment that is at hand and shall be suitable for the recovery of the flammable refrigerant. Ensure that the correct number of cylinders for holding the total system charge is available. All cylinders to be used are designated for the recovered refrigerant and labelled for that refrigerant (i.e. special cylinders for the recovery of refrigerant). Cylinders shall be complete with pressure-relief valve and associated shut-off valves in good working order. Empty recovery cylinders are evacuated and, if possible, cooled before recovery occurs. In addition, a set of calibrated weighing scales shall be available and in good working order. Hoses shall be complete with leak-free disconnect couplings and in good condition.

**4.** Pump down refrigerant system

**5.** Make sure that cylinder is situated on the scales before recovery takes place.

**6.** Start the recovery machine and operate in accordance with instructions and.

**7.** Do not overfill cylinders (no more than 80% volume liquid charge).

**8.** Do not exceed the maximum working pressure of the cylinder, even temporarily.

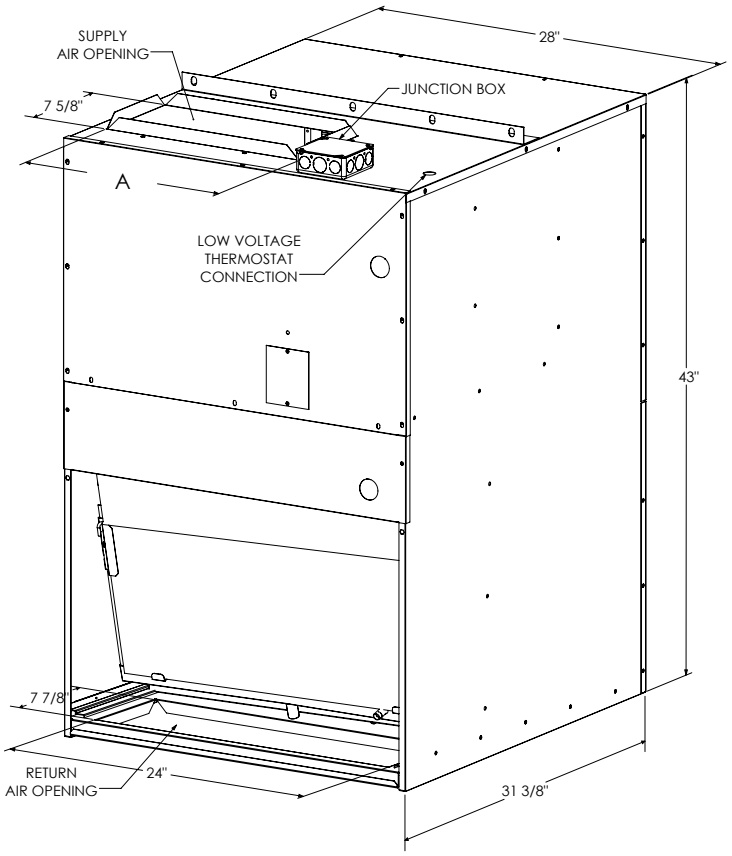
**9.** When the cylinders have been filled correctly and the process completed, make sure that the cylinders and the equipment are removed from site promptly and all isolation valves on the equipment are closed off.

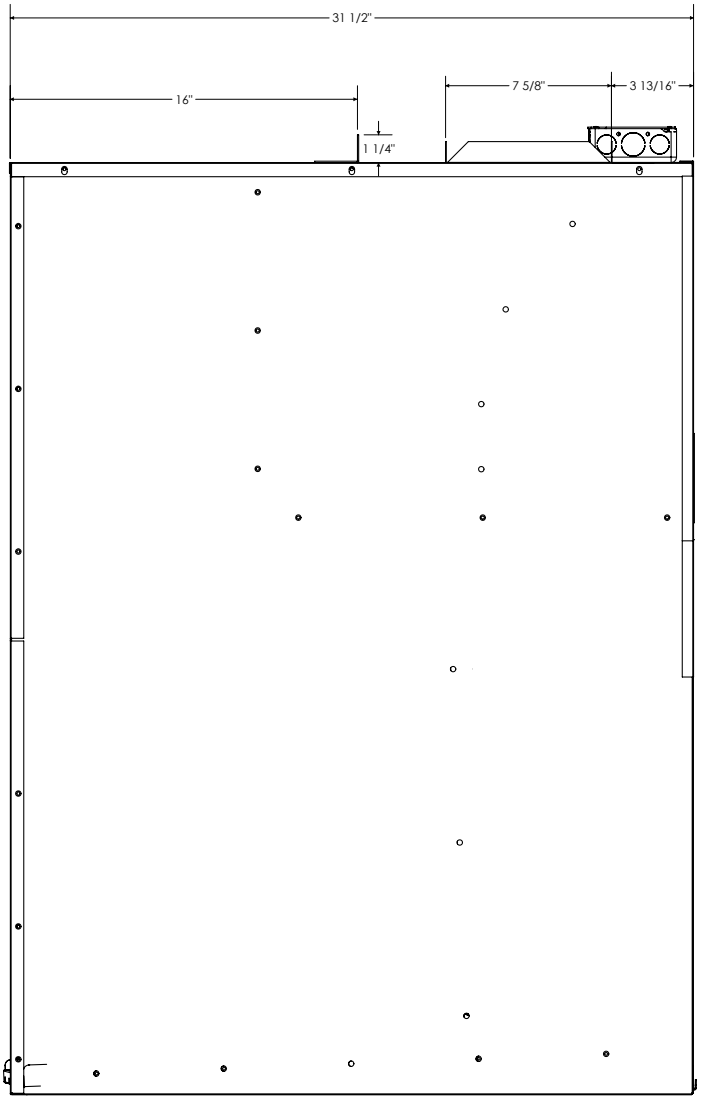
**10.** Recovered refrigerant shall not be charged into another REFRIGERATING SYSTEM unless it has been cleaned and checked. Recovered refrigerant shall be processed according to local legislation in the correct recovery cylinder, and the relevant waste transfer note arranged. Do not mix refrigerants in recovery units and especially not in cylinders.

**11.** Equipment shall be labelled stating that it has been de-commissioned and emptied of refrigerant. The label shall be dated and signed. Label shall state the equipment contains FLAMMABLE REFRIGERANT.

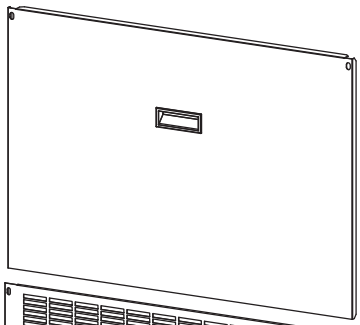
**12.** If compressors or compressor oils are to be removed, ensure that they have been evacuated to an acceptable level to make certain that flammable refrigerant does not remain within the lubricant. The compressor body shall not be heated by an open flame or other ignition sources to accelerate this process. When oil is drained from a system, it shall be carried out safely.

## Comfort Pack CPE Dimension Drawing

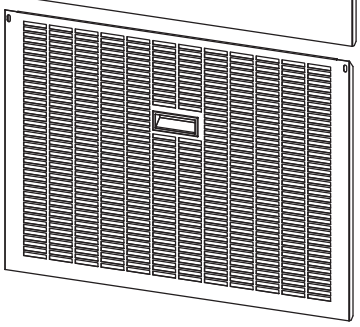



SIDE VIEW



Standard Filter Door



Option (B)
Slotted Filter Door
for Open Returns

NOTE: Unit must be mounted a minimum of 8 inches above finished floor.

## Performance Data

| Up to 12.5 SEER2 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Model | Nominal Cooling Tons | Cooling Btu/h | Sensible Btu/h | SEER2 | Charge R-454B (Oz.) | Heat Kit | Heat Btu/h | | Heating kW | | Heating Amps | | Shipping Weight (lbs.) |
| | | | | | | | 208V | 230V | 208V | 230V | 208V | 230V | |
| CPE50900UA | 0.75 | 8,900 | 6,500 | 11.7 | 30 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 315 |
| | 0.75 | 8,900 | 6,500 | 11.7 | 30 | CPEHK03 | 8,900 | 10,900 | 2.61 | 3.19 | 12.54 | 13.89 | 315 |
| | 0.75 | 8,900 | 6,500 | 11.7 | 30 | CPEHK05 | 13,100 | 16,000 | 3.84 | 4.69 | 18.45 | 20.38 | 315 |
| | 0.75 | 8,900 | 6,500 | 11.7 | 30 | CPEHK07 | 18,300 | 22,400 | 5.36 | 6.56 | 25.78 | 28.54 | 315 |
| | 0.75 | 8,900 | 6,500 | 11.7 | 30 | CPEHK10 | 26,000 | 32,000 | 7.62 | 9.38 | 36.63 | 40.77 | 315 |
| CPE51200UA | 1.0 | 11,800 | 8,500 | 12.3 | 30 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 315 |
| | 1.0 | 11,800 | 8,500 | 12.3 | 30 | CPEHK03 | 8,900 | 10,900 | 2.61 | 3.19 | 12.54 | 13.89 | 315 |
| | 1.0 | 11,800 | 8,500 | 12.3 | 30 | CPEHK05 | 13,100 | 16,000 | 3.84 | 4.69 | 18.45 | 20.38 | 315 |
| | 1.0 | 11,800 | 8,500 | 12.3 | 30 | CPEHK07 | 18,300 | 22,400 | 5.36 | 6.56 | 25.78 | 28.54 | 315 |
| | 1.0 | 11,800 | 8,500 | 12.3 | 30 | CPEHK10 | 26,000 | 32,000 | 7.62 | 9.38 | 36.63 | 40.77 | 315 |
| CPE51800UA | 1.5 | 17,600 | 12,900 | 12.5 | 42 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 325 |
| | 1.5 | 17,600 | 12,900 | 12.5 | 42 | CPEHK03 | 8,900 | 10,900 | 2.61 | 3.19 | 12.54 | 13.89 | 325 |
| | 1.5 | 17,600 | 12,900 | 12.5 | 42 | CPEHK05 | 13,100 | 16,000 | 3.84 | 4.69 | 18.45 | 20.38 | 325 |
| | 1.5 | 17,600 | 12,900 | 12.5 | 42 | CPEHK07 | 18,300 | 22,400 | 5.36 | 6.56 | 25.78 | 28.54 | 325 |
| | 1.5 | 17,600 | 12,900 | 12.5 | 42 | CPEHK10 | 26,000 | 32,000 | 7.62 | 9.38 | 36.63 | 40.77 | 325 |
| | 1.5 | 17,600 | 12,900 | 12.5 | 42 | CPEHK15 | 39,000 | 48,000 | 11.43 | 14.06 | 54.94 | 61.15 | 325 |
| CPE52400UA | 2.0 | 22,400 | 15,600 | 12.3 | 40 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 350 |
| | 2.0 | 22,400 | 15,600 | 12.3 | 40 | CPEHK03 | 8,900 | 10,900 | 2.61 | 3.19 | 12.54 | 13.89 | 350 |
| | 2.0 | 22,400 | 15,600 | 12.3 | 40 | CPEHK05 | 13,100 | 16,000 | 3.84 | 4.69 | 18.45 | 20.38 | 350 |
| | 2.0 | 22,400 | 15,600 | 12.3 | 40 | CPEHK07 | 18,300 | 22,400 | 5.36 | 6.56 | 25.78 | 28.54 | 350 |
| | 2.0 | 22,400 | 15,600 | 12.3 | 40 | CPEHK10 | 26,000 | 32,000 | 7.62 | 9.38 | 36.63 | 40.77 | 350 |
| | 2.0 | 22,400 | 15,600 | 12.3 | 40 | CPEHK15 | 39,000 | 48,000 | 11.43 | 14.06 | 54.94 | 61.15 | 350 |

## Electrical Data

| Model | Heat Kit | Voltage | Compressor | | Condenser Motor | | | Blower Motor | | Total Amps | | MCA | | MOP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | RLA | LRA | HP | FLA | LRA | HP | FLA | 208V | 230V | 208V | 230V | 208V | 230V |
| CPE50900UA | N/A | 208/230-1-60 | 3.5 | 21.8 | 1/4 | 2.0 | -- | 1/3 | 2.6 | 8.1 | 8.1 | 9.0 | 9.0 | 15 | 15 |
| | CPEHK03 | 208/230-1-60 | 3.5 | 21.8 | 1/4 | 2.0 | -- | 1/3 | 2.6 | 15.2 | 16.5 | 19.0 | 20.6 | 20 | 25 |
| | CPEHK05 | 208/230-1-60 | 3.5 | 21.8 | 1/4 | 2.0 | -- | 1/3 | 2.6 | 21.0 | 23.0 | 26.3 | 28.7 | 30 | 30 |
| | CPEHK07 | 208/230-1-60 | 3.5 | 21.8 | 1/4 | 2.0 | -- | 1/3 | 2.6 | 28.4 | 31.2 | 35.5 | 39.0 | 40 | 40 |
| | CPEHK10 | 208/230-1-60 | 3.5 | 21.8 | 1/4 | 2.0 | -- | 1/3 | 2.6 | 39.3 | 43.3 | 49.2 | 54.1 | 50 | 60 |
| CPE1200UA | N/A | 208/230-1-60 | 4.7 | 28.7 | 1/4 | 2.0 | -- | 1/3 | 2.6 | 9.3 | 9.3 | 10.5 | 10.5 | 15 | 15 |
| | CPEHK03 | 208/230-1-60 | 4.7 | 28.7 | 1/4 | 2.0 | -- | 1/3 | 2.6 | 15.2 | 16.5 | 19.0 | 20.6 | 20 | 25 |
| | CPEHK05 | 208/230-1-60 | 4.7 | 28.7 | 1/4 | 2.0 | -- | 1/3 | 2.6 | 21.0 | 23.0 | 26.3 | 28.7 | 30 | 30 |
| | CPEHK07 | 208/230-1-60 | 4.7 | 28.7 | 1/4 | 2.0 | -- | 1/3 | 2.6 | 28.4 | 31.2 | 35.5 | 39.0 | 40 | 40 |
| | CPEHK10 | 208/230-1-60 | 4.7 | 28.7 | 1/4 | 2.0 | -- | 1/3 | 2.6 | 39.3 | 43.3 | 49.2 | 54.1 | 50 | 60 |
| CPE51800UA | N/A | 208/230-1-60 | 6.3 | 32.7 | 1/4 | 1.8 | 3.6 | 1/3 | 2.6 | 10.7 | 10.7 | 12.3 | 12.3 | 15 | 15 |
| | CPEHK03 | 208/230-1-60 | 6.3 | 32.7 | 1/4 | 1.8 | 3.6 | 1/3 | 2.6 | 15.2 | 16.5 | 19.0 | 20.6 | 20 | 25 |
| | CPEHK05 | 208/230-1-60 | 6.3 | 32.7 | 1/4 | 1.8 | 3.6 | 1/3 | 2.6 | 21.0 | 23.0 | 26.3 | 28.7 | 30 | 30 |
| | CPEHK07 | 208/230-1-60 | 6.3 | 32.7 | 1/4 | 1.8 | 3.6 | 1/3 | 2.6 | 28.4 | 31.2 | 35.5 | 39.0 | 40 | 40 |
| | CPEHK10 | 208/230-1-60 | 6.3 | 32.7 | 1/4 | 1.8 | 3.6 | 1/3 | 2.6 | 39.3 | 43.3 | 49.2 | 54.1 | 50 | 60 |
| | CPEHK15 | 208/230-1-60 | 6.3 | 32.7 | 1/4 | 1.8 | 3.6 | 1/3 | 2.6 | 38.6 | 42.5 | 48.1 | 53.0 | 50 | 60 |
| | | | | | | | | | | 20.2 | 22.2 | 24.1 | 26.5 | 25 | 30 |
| CPE52400UA | N/A | 208/230-1-60 | 8.4 | 41.2 | 1/4 | 2.0 | -- | 1/2 | 3.8 | 14.2 | 14.2 | 16.3 | 16.3 | 25 | 25 |
| | CPEHK03 | 208/230-1-60 | 8.4 | 41.2 | 1/4 | 2.0 | -- | 1/2 | 3.8 | 16.4 | 17.7 | 20.5 | 22.1 | 25 | 25 |
| | CPEHK05 | 208/230-1-60 | 8.4 | 41.2 | 1/4 | 2.0 | -- | 1/2 | 3.8 | 22.2 | 24.2 | 27.8 | 30.2 | 30 | 35 |
| | CPEHK07 | 208/230-1-60 | 8.4 | 41.2 | 1/4 | 2.0 | -- | 1/2 | 3.8 | 29.6 | 32.4 | 37.0 | 40.5 | 40 | 45 |
| | CPEHK10 | 208/230-1-60 | 8.4 | 41.2 | 1/4 | 2.0 | -- | 1/2 | 3.8 | 40.5 | 44.5 | 50.7 | 55.6 | 60 | 60 |
| | CPEHK15 | 208/230-1-60 | 8.4 | 41.2 | 1/4 | 2.0 | -- | 1/2 | 3.8 | 38.8 | 42.6 | 49.1 | 54.0 | 50 | 60 |
| | | | | | | | | | | 20.4 | 22.3 | 24.6 | 27.0 | 25 | 30 |

## Other Options

| | |
|---|---|
| CPWS | Wall Sleeve (Unassembled) |
| CPWSA | Wall Sleeve Adapter (Unassembled) |
| CPLG | Architectural Louver Grille |
| CPLG-S | Architectural Louver Grille for Sleeve |
| CPLG-P | Architectural Louver Grille Painted |
| CPLG-SP | Architectural Louver Grille for Sleeve Painted |
| CPSG-P | Stamped Grille Painted |
| A | Standard |
| B | Slotted Door |
| C | Without Rear Grille |
| D | Both B & C |

NOTE: National Comfort Products offers Architectural Louver Grilles for all models. Outdoor grilles provided by others must be approved by National Comfort Products to maintain unit performance and warranty coverage. See Comfort Pack Architectural Options Specification Sheet for more details.

| 208V | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Comfort Pack with Electric Heat Kit CFM and Temperature Rise 3kW Input | | | | | | | | | | | | |
| **UNIT SIZE** | **COLOR** | **SPEED** | **.1" w.c.** | **TD** | **.2" w.c.** | **TD** | **.3" w.c.** | **TD** | **.4" w.c.** | **TD** | **.5" w.c.** | **TD** |
| CPE50900UA | Red | 1 | 760 | 10.8 | 745 | 11.1 | 730 | 11.3 | 715 | 11.5 | 700 | 11.8 |
| | Yellow | 2 | 650 | 12.7 | 640 | 12.9 | 630 | 13.1 | 615 | 13.4 | 600 | 13.7 |
| | Blue | 3 | 560 | 14.7 | 535 | 15.4 | 520 | 15.8 | 510 | 13.5 | 500 | 16.5 |
| | Black | 4 | 440 | 18.7 | 425 | 19.4 | 410 | 20.1 | 390 | 21.1 | 370 | 22.3 |
| | Orange | 5 | 390 | 21.1 | 360 | 22.9 | 330 | 25.0 | 310 | 26.6 | 290 | 28.4 |
| CPE51200UA | Red | 1 | 760 | 10.8 | 745 | 11.1 | 730 | 11.3 | 715 | 11.5 | 700 | 11.8 |
| | Yellow | 2 | 650 | 12.7 | 640 | 12.9 | 630 | 13.1 | 615 | 13.4 | 600 | 13.7 |
| | Blue | 3 | 560 | 14.7 | 535 | 15.4 | 520 | 15.8 | 510 | 13.5 | 500 | 16.5 |
| | Black | 4 | 440 | 18.7 | 425 | 19.4 | 410 | 20.1 | 390 | 21.1 | 370 | 22.3 |
| | Orange | 5 | 390 | 21.1 | 360 | 22.9 | 330 | 25.0 | 310 | 26.6 | 290 | 28.4 |
| CPE51800UA | Red | 1 | 760 | 10.8 | 745 | 11.1 | 730 | 11.3 | 715 | 11.5 | 700 | 11.8 |
| | Yellow | 2 | 650 | 12.7 | 640 | 12.9 | 630 | 13.1 | 615 | 13.4 | 600 | 13.7 |
| | Blue | 3 | 560 | 14.7 | 535 | 15.4 | 520 | 15.8 | 510 | 13.5 | 500 | 16.5 |
| | Black | 4 | 440 | 18.7 | 425 | 19.4 | 410 | 20.1 | 390 | 21.1 | 370 | 22.3 |
| | Orange | 5 | 390 | 21.1 | 360 | 22.9 | 330 | 25.0 | 310 | 26.6 | 290 | 28.4 |
| CPE52400UA | Red | 1 | 870 | 9.5 | 850 | 9.7 | 830 | 9.9 | 810 | 10.2 | 790 | 10.4 |
| | Yellow | 2 | 760 | 10.8 | 745 | 11.1 | 730 | 11.3 | 715 | 11.5 | 690 | 11.9 |
| | Blue | 3 | 680 | 12.1 | 665 | 12.4 | 650 | 12.7 | 630 | 13.1 | 610 | 13.5 |
| | Black | 4 | 590 | 14.0 | 565 | 14.6 | 540 | 15.3 | 525 | 15.7 | 510 | 16.2 |
| | Orange | 5 | 440 | 18.7 | 425 | 19.4 | 410 | 20.1 | 400 | 20.6 | 390 | 21.1 |

| 208V | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Comfort Pack with Electric Heat Kit CFM and Temperature Rise 5kW Input | | | | | | | | | | | | |
| **UNIT SIZE** | **COLOR** | **SPEED** | **.1" w.c.** | **TD** | **.2" w.c.** | **TD** | **.3" w.c.** | **TD** | **.4" w.c.** | **TD** | **.5" w.c.** | **TD** |
| CPE50900UA | Red | 1 | 760 | 16.0 | 745 | 16.3 | 730 | 16.6 | 715 | 17.0 | 700 | 17.3 |
| | Yellow | 2 | 650 | 18.7 | 640 | 19.0 | 630 | 19.3 | 615 | 19.7 | 600 | 20.2 |
| | Blue | 3 | 560 | 21.7 | 535 | 22.7 | 520 | 23.3 | 510 | 23.8 | 500 | 24.3 |
| | Black | 4 | 440 | 27.6 | 425 | 28.5 | 410 | 29.6 | 390 | 31.1 | 370 | 32.8 |
| | Orange | 5 | 390 | 31.1 | 360 | 33.7 | 330 | 36.8 | 310 | 39.1 | 290 | 41.8 |
| CPE51200UA | Red | 1 | 760 | 16.0 | 745 | 16.3 | 730 | 16.6 | 715 | 17.0 | 700 | 17.3 |
| | Yellow | 2 | 650 | 18.7 | 640 | 19.0 | 630 | 19.3 | 615 | 19.7 | 600 | 20.2 |
| | Blue | 3 | 560 | 21.7 | 535 | 22.7 | 520 | 23.3 | 510 | 23.8 | 500 | 24.3 |
| | Black | 4 | 440 | 27.6 | 425 | 28.5 | 410 | 29.6 | 390 | 31.1 | 370 | 32.8 |
| | Orange | 5 | 390 | 31.1 | 360 | 33.7 | 330 | 36.8 | 310 | 39.1 | 290 | 41.8 |
| CPE51800UA | Red | 1 | 760 | 16.0 | 745 | 16.3 | 730 | 16.6 | 715 | 17.0 | 700 | 17.3 |
| | Yellow | 2 | 650 | 18.7 | 640 | 19.0 | 630 | 19.3 | 615 | 19.7 | 600 | 20.2 |
| | Blue | 3 | 560 | 21.7 | 535 | 22.7 | 520 | 23.3 | 510 | 23.8 | 500 | 24.3 |
| | Black | 4 | 440 | 27.6 | 425 | 28.5 | 410 | 29.6 | 390 | 31.1 | 370 | 32.8 |
| | Orange | 5 | 390 | 31.1 | 360 | 33.7 | 330 | 36.8 | 310 | 39.1 | 290 | 41.8 |
| CPE52400UA | Red | 1 | 870 | 13.9 | 850 | 14.3 | 830 | 14.6 | 810 | 15.0 | 790 | 15.4 |
| | Yellow | 2 | 760 | 16.0 | 745 | 16.3 | 730 | 16.6 | 715 | 17.0 | 690 | 17.6 |
| | Blue | 3 | 680 | 17.8 | 665 | 18.2 | 650 | 18.7 | 630 | 19.3 | 610 | 19.9 |
| | Black | 4 | 590 | 20.6 | 565 | 21.5 | 540 | 22.5 | 525 | 23.1 | 510 | 23.8 |
| | Orange | 5 | 440 | 27.6 | 425 | 28.5 | 410 | 29.6 | 400 | 30.3 | 390 | 31.1 |

= Factory Recommended Heat Speed Setting

| 208 V | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Comfort Pack with Electric Heat Kit CFM and Temperature Rise 7kW Input | | | | | | | | | | | | |
| UNIT SIZE | COLOR | SPEED | .1" w.c. | TD | .2" w.c. | TD | .3" w.c. | TD | .4" w.c. | TD | .5" w.c. | TD |
| CPE50900UA | Red | 1 | 760 | 22.3 | 745 | 22.7 | 730 | 23.2 | 715 | 23.7 | 700 | 24.2 |
| | Yellow | 2 | 650 | 26.1 | 640 | 26.5 | 630 | 26.9 | 615 | 27.6 | 600 | 28.2 |
| | Blue | 3 | 560 | 30.3 | 535 | 31.7 | 520 | 32.6 | 510 | 33.2 | 500 | 33.9 |
| | Black | 4 | 440 | 38.5 | 425 | 39.9 | 410 | 41.3 | 390 | 43.4 | 370 | 45.8 |
| | Orange | 5 | 390 | 43.4 | 360 | 47.1 | 330 | 51.3 | 310 | 54.7 | 290 | 58.4 |
| CPE51200UA | Red | 1 | 760 | 22.3 | 745 | 22.7 | 730 | 23.2 | 715 | 23.7 | 700 | 24.2 |
| | Yellow | 2 | 650 | 26.1 | 640 | 26.5 | 630 | 26.9 | 615 | 27.6 | 600 | 28.2 |
| | Blue | 3 | 560 | 30.3 | 535 | 31.7 | 520 | 32.6 | 510 | 33.2 | 500 | 33.9 |
| | Black | 4 | 440 | 38.5 | 425 | 39.9 | 410 | 41.3 | 390 | 43.4 | 370 | 45.8 |
| | Orange | 5 | 390 | 43.4 | 360 | 47.1 | 330 | 51.3 | 310 | 54.7 | 290 | 58.4 |
| CPE51800UA | Red | 1 | 760 | 22.3 | 745 | 22.7 | 730 | 23.2 | 715 | 23.7 | 700 | 24.2 |
| | Yellow | 2 | 650 | 26.1 | 640 | 26.5 | 630 | 26.9 | 615 | 27.6 | 600 | 28.2 |
| | Blue | 3 | 560 | 30.3 | 535 | 31.7 | 520 | 32.6 | 510 | 33.2 | 500 | 33.9 |
| | Black | 4 | 440 | 38.5 | 425 | 39.9 | 410 | 41.3 | 390 | 43.4 | 370 | 45.8 |
| | Orange | 5 | 390 | 43.4 | 360 | 47.1 | 330 | 51.3 | 310 | 54.7 | 290 | 58.4 |
| CPE52400UA | Red | 1 | 870 | 19.5 | 850 | 19.9 | 830 | 20.4 | 810 | 20.9 | 790 | 21.4 |
| | Yellow | 2 | 760 | 22.3 | 745 | 22.7 | 730 | 23.2 | 715 | 23.7 | 690 | 24.6 |
| | Blue | 3 | 680 | 24.9 | 665 | 25.5 | 650 | 26.1 | 630 | 26.9 | 610 | 27.8 |
| | Black | 4 | 590 | 28.7 | 565 | 30.0 | 540 | 31.4 | 525 | 32.3 | 510 | 33.2 |
| | Orange | 5 | 440 | 38.5 | 425 | 39.9 | 410 | 41.3 | 400 | 42.4 | 390 | 43.4 |

= Factory Recommended Heat Speed Setting

| 208V | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Comfort Pack with Electric Heat Kit CFM and Temperature Rise 10kW Input | | | | | | | | | | | | |
| UNIT SIZE | COLOR | SPEED | .1" w.c. | TD | .2" w.c. | TD | .3" w.c. | TD | .4" w.c. | TD | .5" w.c. | TD |
| CPE50900UA | Red | 1 | 760 | 31.7 | 745 | 32.3 | 730 | 33.0 | 715 | 33.7 | 700 | 34.4 |
| | Yellow | 2 | 650 | 37.0 | 640 | 37.6 | 630 | 38.2 | 615 | 39.1 | 600 | 40.1 |
| | Blue | 3 | 560 | 43.0 | 535 | 45.0 | 520 | 46.3 | 510 | 47.2 | 500 | 48.1 |
| | Black | 4 | 440 | 54.7 | 425 | 56.6 | 410 | 58.7 | 390 | 61.7 | 370 | 65.1 |
| | Orange | 5 | 390 | 61.7 | 360 | 66.9 | 330 | 73.0 | 310 | 77.7 | 290 | 83.0 |
| CPE51200UA | Red | 1 | 760 | 31.7 | 745 | 32.3 | 730 | 33.0 | 715 | 33.7 | 700 | 34.4 |
| | Yellow | 2 | 650 | 37.0 | 640 | 37.6 | 630 | 38.2 | 615 | 39.1 | 600 | 40.1 |
| | Blue | 3 | 560 | 43.0 | 535 | 45.0 | 520 | 46.3 | 510 | 47.2 | 500 | 48.1 |
| | Black | 4 | 440 | 54.7 | 425 | 56.6 | 410 | 58.7 | 390 | 61.7 | 370 | 65.1 |
| | Orange | 5 | 390 | 61.7 | 360 | 66.9 | 330 | 73.0 | 310 | 77.7 | 290 | 83.0 |
| CPE51800UA | Red | 1 | 760 | 31.7 | 745 | 32.3 | 730 | 33.0 | 715 | 33.7 | 700 | 34.4 |
| | Yellow | 2 | 650 | 37.0 | 640 | 37.6 | 630 | 38.2 | 615 | 39.1 | 600 | 40.1 |
| | Blue | 3 | 560 | 43.0 | 535 | 45.0 | 520 | 46.3 | 510 | 47.2 | 500 | 48.1 |
| | Black | 4 | 440 | 54.7 | 425 | 56.6 | 410 | 58.7 | 390 | 61.7 | 370 | 65.1 |
| | Orange | 5 | 390 | 61.7 | 360 | 66.9 | 330 | 73.0 | 310 | 77.7 | 290 | 83.0 |
| CPE52400UA | Red | 1 | 870 | 27.7 | 850 | 28.3 | 830 | 29.0 | 810 | 29.7 | 790 | 30.5 |
| | Yellow | 2 | 760 | 31.7 | 745 | 32.3 | 730 | 33.0 | 715 | 33.7 | 690 | 34.9 |
| | Blue | 3 | 680 | 35.4 | 665 | 36.2 | 650 | 37.0 | 630 | 38.2 | 610 | 39.5 |
| | Black | 4 | 590 | 40.8 | 565 | 42.6 | 540 | 44.6 | 525 | 45.9 | 510 | 47.2 |
| | Orange | 5 | 440 | 54.7 | 425 | 56.6 | 410 | 58.7 | 400 | 60.2 | 390 | 61.7 |

= Factory Recommended Heat Speed Setting

| 208 V | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Comfort Pack with Electric Heat Kit CFM and Temperature Rise 15kW Input | | | | | | | | | | | | |
| **UNIT SIZE** | **COLOR** | **SPEED** | **.1" w.c.** | **TD** | **.2" w.c.** | **TD** | **.3" w.c.** | **TD** | **.4" w.c.** | **TD** | **.5" w.c.** | **TD** |
| CPE51200UA | Red | 1 | 760 | 47.5 | 745 | 48.5 | 730 | 49.5 | 715 | 50.5 | 700 | 51.6 |
| | Yellow | 2 | 650 | 55.6 | 640 | 56.4 | 630 | 57.3 | 615 | 58.7 | 600 | 60.2 |
| | Blue | 3 | 560 | 64.5 | 535 | 67.5 | 520 | 69.4 | 510 | 70.8 | 500 | 72.2 |
| | Black | 4 | 440 | 82.1 | 425 | 85.0 | 410 | 88.1 | 390 | 92.6 | 370 | 97.6 |
| | Orange | 5 | 390 | 92.6 | 360 | 100.3 | 330 | 109.4 | 310 | 116.5 | 290 | 124.5 |
| CPE51800UA | Red | 1 | 760 | 47.5 | 745 | 48.5 | 730 | 49.5 | 715 | 50.5 | 700 | 51.6 |
| | Yellow | 2 | 650 | 55.6 | 640 | 56.4 | 630 | 57.3 | 615 | 58.7 | 600 | 60.2 |
| | Blue | 3 | 560 | 64.5 | 535 | 67.5 | 520 | 69.4 | 510 | 70.8 | 500 | 72.2 |
| | Black | 4 | 440 | 82.1 | 425 | 85.0 | 410 | 88.1 | 390 | 92.6 | 370 | 97.6 |
| | Orange | 5 | 390 | 92.6 | 360 | 100.3 | 330 | 109.4 | 310 | 116.5 | 290 | 124.5 |
| CPE52400UA | Red | 1 | 870 | 41.5 | 850 | 42.5 | 830 | 43.5 | 810 | 44.6 | 790 | 45.7 |
| | Yellow | 2 | 760 | 47.5 | 745 | 48.5 | 730 | 49.5 | 715 | 50.5 | 690 | 52.3 |
| | Blue | 3 | 680 | 53.1 | 665 | 54.3 | 650 | 55.6 | 630 | 57.3 | 610 | 59.2 |
| | Black | 4 | 590 | 61.2 | 565 | 63.9 | 540 | 66.9 | 525 | 68.8 | 510 | 70.8 |
| | Orange | 5 | 440 | 82.1 | 425 | 85.0 | 410 | 88.1 | 400 | 90.3 | 390 | 92.6 |

= Factory Recommended Heat Speed Setting

| 230 V | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Comfort Pack with Electric Heat Kit CFM and Temperature Rise 3kW Input | | | | | | | | | | | | |
| **UNIT SIZE** | **COLOR** | **SPEED** | **.1" w.c.** | **TD** | **.2" w.c.** | **TD** | **.3" w.c.** | **TD** | **.4" w.c.** | **TD** | **.5" w.c.** | **TD** |
| CPE50900UA | Red | 1 | 760 | 13.3 | 745 | 13.5 | 730 | 13.8 | 715 | 14.1 | 700 | 14.4 |
| | Yellow | 2 | 650 | 15.5 | 640 | 15.8 | 630 | 16.0 | 615 | 16.4 | 600 | 16.8 |
| | Blue | 3 | 560 | 18.0 | 535 | 18.9 | 520 | 19.4 | 510 | 16.5 | 500 | 20.2 |
| | Black | 4 | 440 | 22.9 | 425 | 23.7 | 410 | 24.6 | 390 | 25.9 | 370 | 27.3 |
| | Orange | 5 | 390 | 25.9 | 360 | 28.0 | 330 | 30.6 | 310 | 32.6 | 290 | 34.8 |
| CPE51200UA | Red | 1 | 760 | 13.3 | 745 | 13.5 | 730 | 13.8 | 715 | 14.1 | 700 | 14.4 |
| | Yellow | 2 | 650 | 15.5 | 640 | 15.8 | 630 | 16.0 | 615 | 16.4 | 600 | 16.8 |
| | Blue | 3 | 560 | 18.0 | 535 | 18.9 | 520 | 19.4 | 510 | 16.5 | 500 | 20.2 |
| | Black | 4 | 440 | 22.9 | 425 | 23.7 | 410 | 24.6 | 390 | 25.9 | 370 | 27.3 |
| | Orange | 5 | 390 | 25.9 | 360 | 28.0 | 330 | 30.6 | 310 | 32.6 | 290 | 34.8 |
| CPE51800UA | Red | 1 | 760 | 13.3 | 745 | 13.5 | 730 | 13.8 | 715 | 14.1 | 700 | 14.4 |
| | Yellow | 2 | 650 | 15.5 | 640 | 15.8 | 630 | 16.0 | 615 | 16.4 | 600 | 16.8 |
| | Blue | 3 | 560 | 18.0 | 535 | 18.9 | 520 | 19.4 | 510 | 16.5 | 500 | 20.2 |
| | Black | 4 | 440 | 22.9 | 425 | 23.7 | 410 | 24.6 | 390 | 25.9 | 370 | 27.3 |
| | Orange | 5 | 390 | 25.9 | 360 | 28.0 | 330 | 30.6 | 310 | 32.6 | 290 | 34.8 |
| CPE52400UA | Red | 1 | 870 | 11.6 | 850 | 11.9 | 830 | 12.2 | 810 | 12.5 | 790 | 12.8 |
| | Yellow | 2 | 760 | 13.3 | 745 | 13.5 | 730 | 13.8 | 715 | 14.1 | 690 | 14.6 |
| | Blue | 3 | 680 | 14.8 | 665 | 15.2 | 650 | 15.5 | 630 | 16.0 | 610 | 16.5 |
| | Black | 4 | 590 | 17.1 | 565 | 17.9 | 540 | 18.7 | 525 | 19.2 | 510 | 19.8 |
| | Orange | 5 | 440 | 22.9 | 425 | 23.7 | 410 | 24.6 | 400 | 25.2 | 390 | 25.9 |

= Factory Recommended Heat Speed Setting

| 230 V | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Comfort Pack with Electric Heat Kit CFM and Temperature Rise 5kW Input** | | | | | | | | | | | | |
| **UNIT SIZE** | **COLOR** | **SPEED** | **.1" w.c.** | **TD** | **.2" w.c.** | **TD** | **.3" w.c.** | **TD** | **.4" w.c.** | **TD** | **.5" w.c.** | **TD** |
| CPE50900UA | Red | 1 | 760 | 19.5 | 745 | 19.9 | 730 | 20.3 | 715 | 20.7 | 700 | 21.2 |
| | Yellow | 2 | 650 | 22.8 | 640 | 23.1 | 630 | 23.5 | 615 | 24.1 | 600 | 24.7 |
| | Blue | 3 | 560 | 26.5 | 535 | 27.7 | 520 | 28.5 | 510 | 29.0 | 500 | 29.6 |
| | Black | 4 | 440 | 33.7 | 425 | 34.9 | 410 | 36.1 | 390 | 38.0 | 370 | 40.0 |
| | Orange | 5 | 390 | 38.0 | 360 | 41.2 | 330 | 44.9 | 310 | 47.8 | 290 | 51.1 |
| CPE51200UA | Red | 1 | 760 | 19.5 | 745 | 19.9 | 730 | 20.3 | 715 | 20.7 | 700 | 21.2 |
| | Yellow | 2 | 650 | 22.8 | 640 | 23.1 | 630 | 23.5 | 615 | 24.1 | 600 | 24.7 |
| | Blue | 3 | 560 | 26.5 | 535 | 27.7 | 520 | 28.5 | 510 | 29.0 | 500 | 29.6 |
| | Black | 4 | 440 | 33.7 | 425 | 34.9 | 410 | 36.1 | 390 | 38.0 | 370 | 40.0 |
| | Orange | 5 | 390 | 38.0 | 360 | 41.2 | 330 | 44.9 | 310 | 47.8 | 290 | 51.1 |
| CPE51800UA | Red | 1 | 760 | 19.5 | 745 | 19.9 | 730 | 20.3 | 715 | 20.7 | 700 | 21.2 |
| | Yellow | 2 | 650 | 22.8 | 640 | 23.1 | 630 | 23.5 | 615 | 24.1 | 600 | 24.7 |
| | Blue | 3 | 560 | 26.5 | 535 | 27.7 | 520 | 28.5 | 510 | 29.0 | 500 | 29.6 |
| | Black | 4 | 440 | 33.7 | 425 | 34.9 | 410 | 36.1 | 390 | 38.0 | 370 | 40.0 |
| | Orange | 5 | 390 | 38.0 | 360 | 41.2 | 330 | 44.9 | 310 | 47.8 | 290 | 51.1 |
| CPE52400UA | Red | 1 | 870 | 17.0 | 850 | 17.4 | 830 | 17.8 | 810 | 18.3 | 790 | 18.8 |
| | Yellow | 2 | 760 | 19.5 | 745 | 19.9 | 730 | 20.3 | 715 | 20.7 | 690 | 21.5 |
| | Blue | 3 | 680 | 21.8 | 665 | 22.3 | 650 | 22.8 | 630 | 23.5 | 610 | 24.3 |
| | Black | 4 | 590 | 25.1 | 565 | 26.2 | 540 | 27.4 | 525 | 28.2 | 510 | 29.0 |
| | Orange | 5 | 440 | 33.7 | 425 | 34.9 | 410 | 36.1 | 400 | 37.0 | 390 | 38.0 |

= Factory Recommended Heat Speed Setting

| 230V | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Comfort Pack with Electric Heat Kit CFM and Temperature Rise 7kW Input** | | | | | | | | | | | | |
| **UNIT SIZE** | **COLOR** | **SPEED** | **.1" w.c.** | **TD** | **.2" w.c.** | **TD** | **.3" w.c.** | **TD** | **.4" w.c.** | **TD** | **.5" w.c.** | **TD** |
| CPE50900UA | Red | 1 | 760 | 27.3 | 745 | 27.8 | 730 | 28.4 | 715 | 29.0 | 700 | 29.6 |
| | Yellow | 2 | 650 | 31.9 | 640 | 32.4 | 630 | 32.9 | 615 | 33.7 | 600 | 34.6 |
| | Blue | 3 | 560 | 37.0 | 535 | 38.8 | 520 | 39.9 | 510 | 40.7 | 500 | 41.5 |
| | Black | 4 | 440 | 47.1 | 425 | 48.8 | 410 | 50.6 | 390 | 53.2 | 370 | 56.1 |
| | Orange | 5 | 390 | 53.2 | 360 | 57.6 | 330 | 62.9 | 310 | 66.9 | 290 | 71.5 |
| CPE51200UA | Red | 1 | 760 | 27.3 | 745 | 27.8 | 730 | 28.4 | 715 | 29.0 | 700 | 29.6 |
| | Yellow | 2 | 650 | 31.9 | 640 | 32.4 | 630 | 32.9 | 615 | 33.7 | 600 | 34.6 |
| | Blue | 3 | 560 | 37.0 | 535 | 38.8 | 520 | 39.9 | 510 | 40.7 | 500 | 41.5 |
| | Black | 4 | 440 | 47.1 | 425 | 48.8 | 410 | 50.6 | 390 | 53.2 | 370 | 56.1 |
| | Orange | 5 | 390 | 53.2 | 360 | 57.6 | 330 | 62.9 | 310 | 66.9 | 290 | 71.5 |
| CPE51800UA | Red | 1 | 760 | 27.3 | 745 | 27.8 | 730 | 28.4 | 715 | 29.0 | 700 | 29.6 |
| | Yellow | 2 | 650 | 31.9 | 640 | 32.4 | 630 | 32.9 | 615 | 33.7 | 600 | 34.6 |
| | Blue | 3 | 560 | 37.0 | 535 | 38.8 | 520 | 39.9 | 510 | 40.7 | 500 | 41.5 |
| | Black | 4 | 440 | 47.1 | 425 | 48.8 | 410 | 50.6 | 390 | 53.2 | 370 | 56.1 |
| | Orange | 5 | 390 | 53.2 | 360 | 57.6 | 330 | 62.9 | 310 | 66.9 | 290 | 71.5 |
| CPE52400UA | Red | 1 | 870 | 23.8 | 850 | 24.4 | 830 | 25.0 | 810 | 25.6 | 790 | 26.3 |
| | Yellow | 2 | 760 | 27.3 | 745 | 27.8 | 730 | 28.4 | 715 | 29.0 | 690 | 30.1 |
| | Blue | 3 | 680 | 30.5 | 665 | 31.2 | 650 | 31.9 | 630 | 32.9 | 610 | 34.0 |
| | Black | 4 | 590 | 35.2 | 565 | 36.7 | 540 | 38.4 | 525 | 39.5 | 510 | 40.7 |
| | Orange | 5 | 440 | 47.1 | 425 | 48.8 | 410 | 50.6 | 400 | 51.9 | 390 | 53.2 |

= Factory Recommended Heat Speed Setting

| 230 V | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Comfort Pack with Electric Heat Kit CFM and Temperature Rise 10kW Input | | | | | | | | | | | | |
| **UNIT SIZE** | **COLOR** | **SPEED** | **.1" w.c.** | **TD** | **.2" w.c.** | **TD** | **.3" w.c.** | **TD** | **.4" w.c.** | **TD** | **.5" w.c.** | **TD** |
| CPE50900UA | Red | 1 | 760 | 39.0 | 745 | 39.8 | 730 | 40.6 | 715 | 41.4 | 700 | 42.3 |
| | Yellow | 2 | 650 | 45.6 | 640 | 46.3 | 630 | 47.0 | 615 | 48.2 | 600 | 49.4 |
| | Blue | 3 | 560 | 52.9 | 535 | 55.4 | 520 | 57.0 | 510 | 58.1 | 500 | 59.3 |
| | Black | 4 | 440 | 67.3 | 425 | 69.7 | 410 | 72.3 | 390 | 76.0 | 370 | 80.1 |
| | Orange | 5 | 390 | 76.0 | 360 | 82.3 | 330 | 89.8 | 310 | 95.6 | 290 | 102.2 |
| CPE51200UA | Red | 1 | 760 | 39.0 | 745 | 39.8 | 730 | 40.6 | 715 | 41.4 | 700 | 42.3 |
| | Yellow | 2 | 650 | 45.6 | 640 | 46.3 | 630 | 47.0 | 615 | 48.2 | 600 | 49.4 |
| | Blue | 3 | 560 | 52.9 | 535 | 55.4 | 520 | 57.0 | 510 | 58.1 | 500 | 59.3 |
| | Black | 4 | 440 | 67.3 | 425 | 69.7 | 410 | 72.3 | 390 | 76.0 | 370 | 80.1 |
| | Orange | 5 | 390 | 76.0 | 360 | 82.3 | 330 | 89.8 | 310 | 95.6 | 290 | 102.2 |
| CPE51800UA | Red | 1 | 760 | 39.0 | 745 | 39.8 | 730 | 40.6 | 715 | 41.4 | 700 | 42.3 |
| | Yellow | 2 | 650 | 45.6 | 640 | 46.3 | 630 | 47.0 | 615 | 48.2 | 600 | 49.4 |
| | Blue | 3 | 560 | 52.9 | 535 | 55.4 | 520 | 57.0 | 510 | 58.1 | 500 | 59.3 |
| | Black | 4 | 440 | 67.3 | 425 | 69.7 | 410 | 72.3 | 390 | 76.0 | 370 | 80.1 |
| | Orange | 5 | 390 | 76.0 | 360 | 82.3 | 330 | 89.8 | 310 | 95.6 | 290 | 102.2 |
| CPE52400UA | Red | 1 | 870 | 34.1 | 850 | 34.9 | 830 | 35.7 | 810 | 36.6 | 790 | 37.5 |
| | Yellow | 2 | 760 | 39.0 | 745 | 39.8 | 730 | 40.6 | 715 | 41.4 | 690 | 42.9 |
| | Blue | 3 | 680 | 43.6 | 665 | 44.6 | 650 | 45.6 | 630 | 47.0 | 610 | 48.6 |
| | Black | 4 | 590 | 50.2 | 565 | 52.4 | 540 | 54.9 | 525 | 56.4 | 510 | 58.1 |
| | Orange | 5 | 440 | 67.3 | 425 | 69.7 | 410 | 72.3 | 400 | 74.1 | 390 | 76.0 |

= Factory Recommended Heat Speed Setting

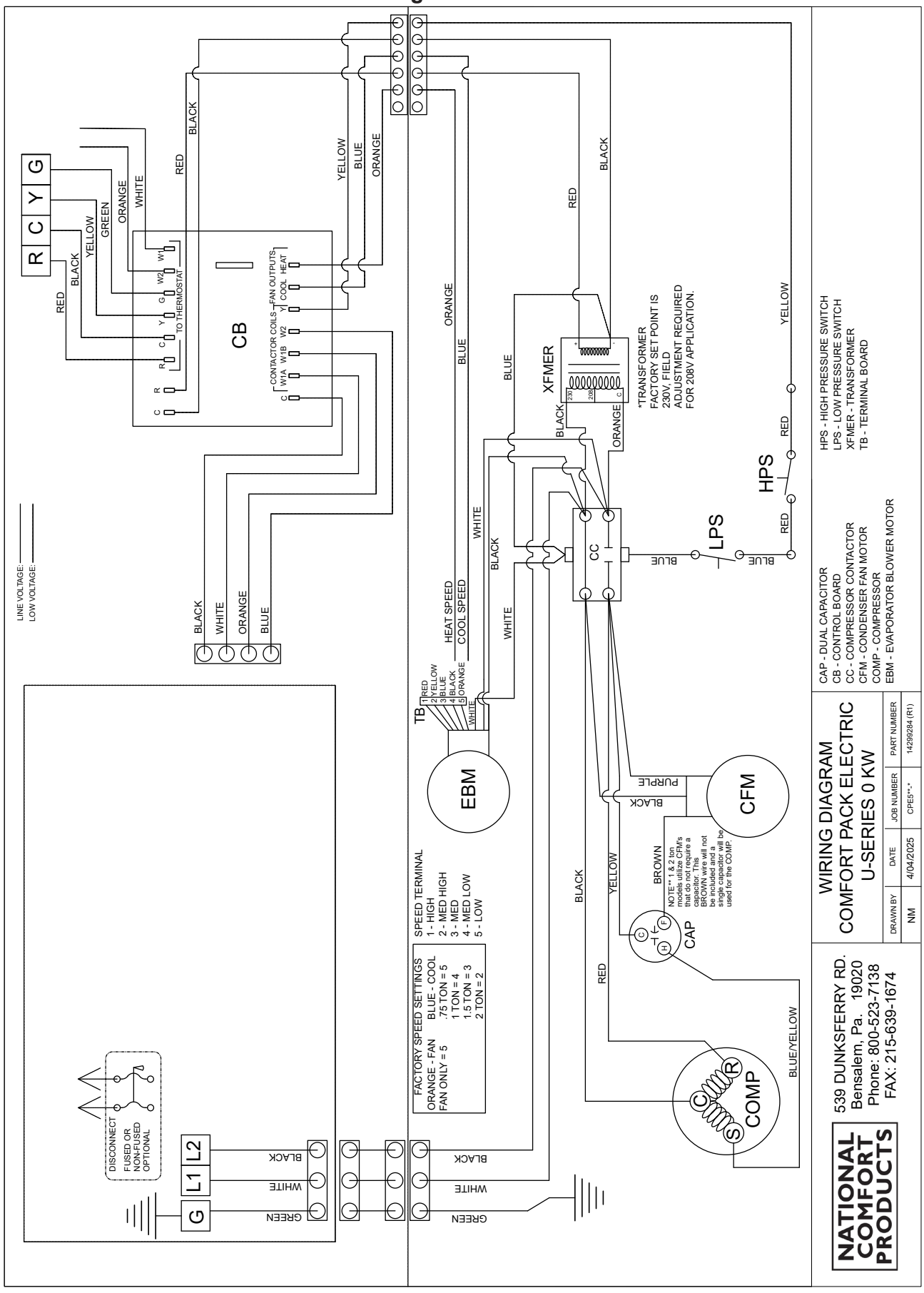
| 230V | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Comfort Pack with Electric Heat Kit CFM and Temperature Rise 15kW Input | | | | | | | | | | | | |
| **UNIT SIZE** | **COLOR** | **SPEED** | **.1" w.c.** | **TD** | **.2" w.c.** | **TD** | **.3" w.c.** | **TD** | **.4" w.c.** | **TD** | **.5" w.c.** | **TD** |
| CPE51200UA | Red | 1 | 760 | 58.5 | 745 | 59.7 | 730 | 60.9 | 715 | 62.2 | 700 | 63.5 |
| | Yellow | 2 | 650 | 68.4 | 640 | 69.4 | 630 | 70.5 | 615 | 72.3 | 600 | 74.1 |
| | Blue | 3 | 560 | 79.4 | 535 | 83.1 | 520 | 85.5 | 510 | 87.1 | 500 | 88.9 |
| | Black | 4 | 440 | 101.0 | 425 | 104.6 | 410 | 108.4 | 390 | 114.0 | 370 | 120.1 |
| | Orange | 5 | 390 | 114.0 | 360 | 123.5 | 330 | 134.7 | 310 | 143.4 | 290 | 153.3 |
| CPE51800UA | Red | 1 | 760 | 58.5 | 745 | 59.7 | 730 | 60.9 | 715 | 62.2 | 700 | 63.5 |
| | Yellow | 2 | 650 | 68.4 | 640 | 69.4 | 630 | 70.5 | 615 | 72.3 | 600 | 74.1 |
| | Blue | 3 | 560 | 79.4 | 535 | 83.1 | 520 | 85.5 | 510 | 87.1 | 500 | 88.9 |
| | Black | 4 | 440 | 101.0 | 425 | 104.6 | 410 | 108.4 | 390 | 114.0 | 370 | 120.1 |
| | Orange | 5 | 390 | 114.0 | 360 | 123.5 | 330 | 134.7 | 310 | 143.4 | 290 | 153.3 |
| CPE52400UA | Red | 1 | 870 | 51.1 | 850 | 52.3 | 830 | 53.5 | 810 | 54.9 | 790 | 56.3 |
| | Yellow | 2 | 760 | 58.5 | 745 | 59.7 | 730 | 60.9 | 715 | 62.2 | 690 | 64.4 |
| | Blue | 3 | 680 | 65.4 | 665 | 66.8 | 650 | 68.4 | 630 | 70.5 | 610 | 72.9 |
| | Black | 4 | 590 | 75.3 | 565 | 78.7 | 540 | 82.3 | 525 | 84.7 | 510 | 87.1 |
| | Orange | 5 | 440 | 101.0 | 425 | 104.6 | 410 | 108.4 | 400 | 111.1 | 390 | 114.0 |

= Factory Recommended Heat Speed Setting

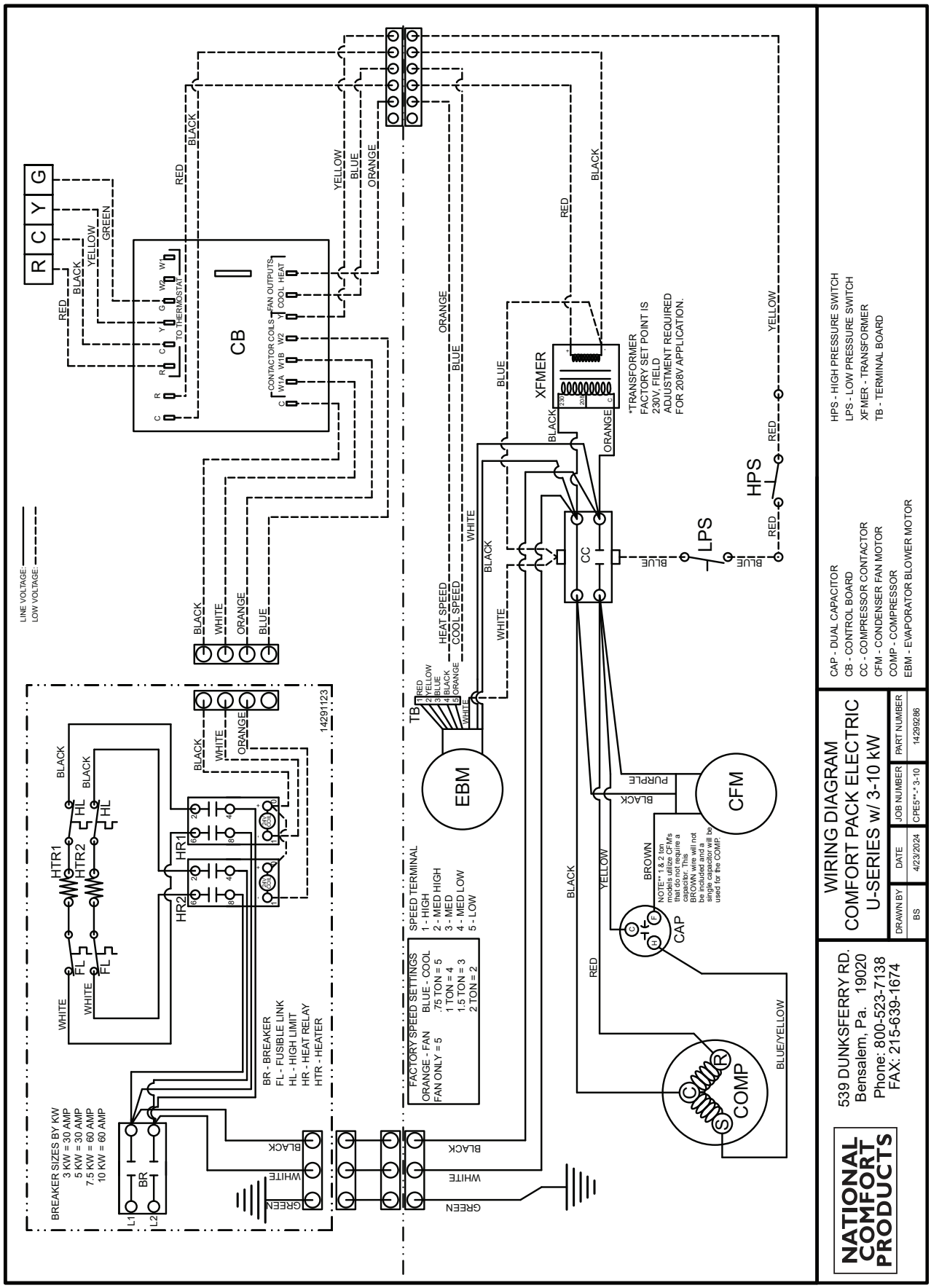
## Air Flow Data

| Models | Color | Speed Tap | ESP (in wc) / CFM | | | | |
|---|---|---|---|---|---|---|---|
| | | | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 |
| CPE509**UA | Red | 1 | 760 | 745 | 730 | 715 | 700 |
| | Yellow | 2 | 650 | 640 | 630 | 615 | 600 |
| | Blue | 3 | 560 | 535 | 520 | 510 | 500 |
| | Black | 4 | 440 | 425 | 410 | 390 | 370 |
| | Orange | 5 | 390 | 360 | 330 | 310 | 290 |
| CPE512**UA | Red | 1 | 760 | 745 | 730 | 715 | 700 |
| | Yellow | 2 | 650 | 640 | 630 | 615 | 600 |
| | Blue | 3 | 560 | 535 | 520 | 510 | 500 |
| | Black | 4 | 440 | 425 | 410 | 390 | 370 |
| | Orange | 5 | 390 | 360 | 330 | 310 | 290 |
| CPE518**UA | Red | 1 | 760 | 745 | 730 | 715 | 700 |
| | Yellow | 2 | 650 | 640 | 630 | 615 | 600 |
| | Blue | 3 | 560 | 535 | 520 | 510 | 500 |
| | Black | 4 | 440 | 425 | 410 | 390 | 370 |
| | Orange | 5 | 390 | 360 | 330 | 310 | 290 |
| CPE524**UA | Red | 1 | 870 | 850 | 830 | 810 | 790 |
| | Yellow | 2 | 760 | 745 | 730 | 715 | 690 |
| | Blue | 3 | 680 | 665 | 650 | 630 | 610 |
| | Black | 4 | 590 | 565 | 540 | 525 | 510 |
| | Orange | 5 | 440 | 425 | 410 | 400 | 390 |

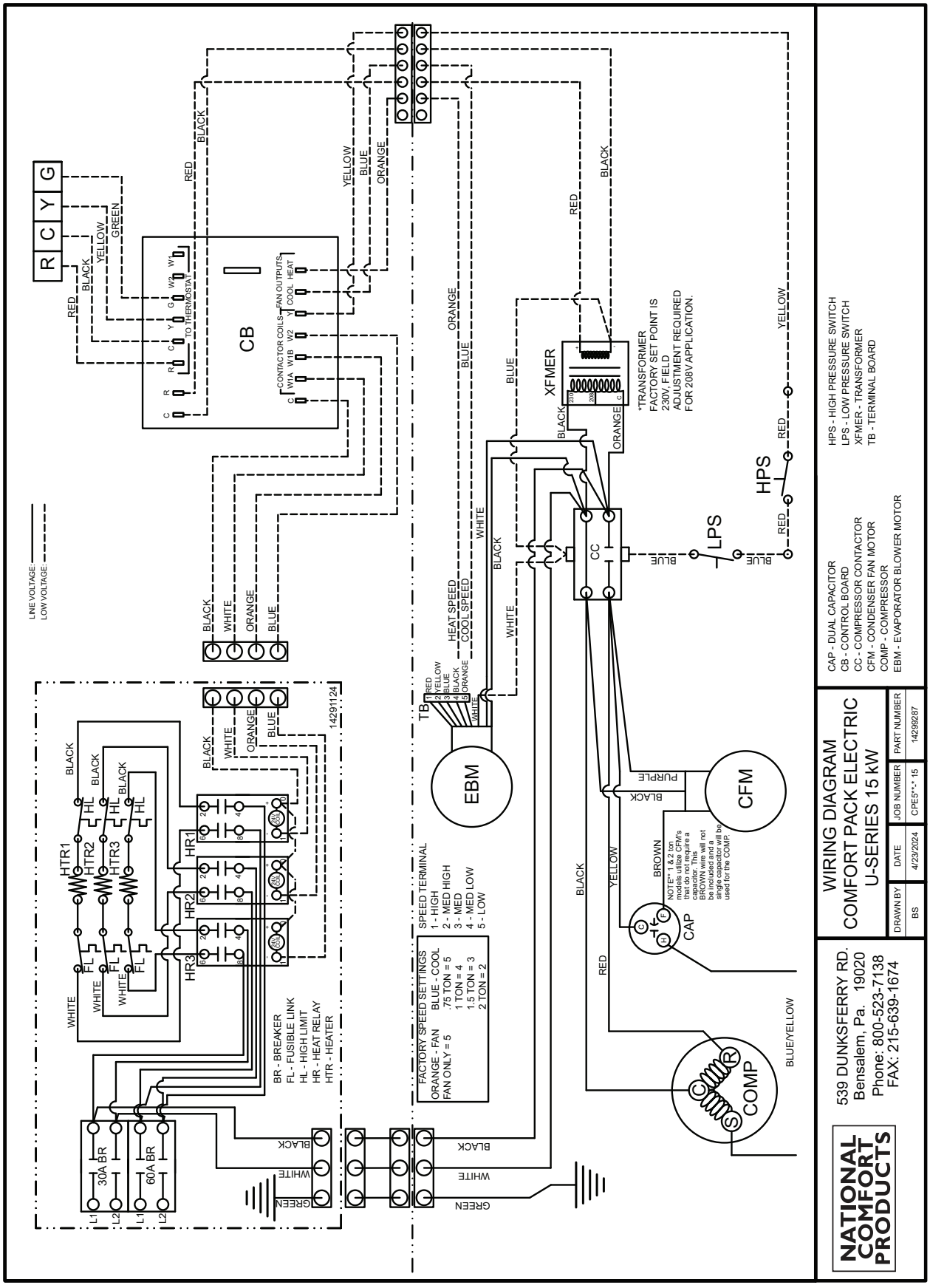
## Wiring Schematic - 0kW



## Wiring Schematic - 3-10kW



## Wiring Schematic - 15kW



| Replacement Parts Guide \| Cabinet Parts | |
|---|---|
| Part Description | Part Number |
| Control Board | 14262041 |
| Wire Harness - Control | 14230025 |
| Wire Harness - Power | 14230029 |
| Top Mount Angle | 14256101 |
| Side Seal Retainer | 14256163 |
| Left Side Panel | 14256423 |
| Right Side Panel | 14256424 |
| Top Panel | 14256425 |
| Lower Discharge Grille | 14256437 |
| Upper Intake Grille | 14256438 |
| Horizontal Air Divider | 14256513 |
| Vertical Air Divider | 14256514 |
| Electric Heater Mount | 14256519 |
| Bottom Panel | 14256600 |
| Rail | 14256605 |
| Blower Cover Mtg Strap | 14256811 |
| Cabinet Air Seal | 14256813 |
| Indoor Blower Cover Plate | 14256814 |
| Lower Access Panel | 14256123-01 |
| Controls Cover | 14256169-01 |
| Top Access Panel | 14256522 |
| Breaker Patch Plate | 14256523 |

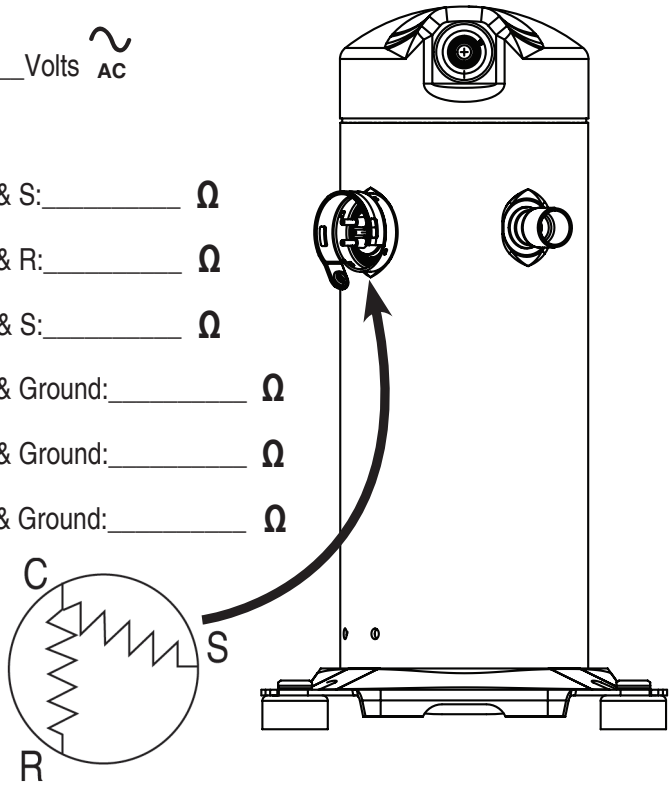
| Replacement Parts Guide \| Chassis Parts | | | | |
|---|---|---|---|---|
| Part Description | Part Number | | | |
| | 0.75 Ton | 1.0 Ton | 1.5 Ton | 2.0 Ton |
| Chassis Model | CPC-4UB-09-1 | CPC-4UB-12-1 | CPC-4UB-18-1 | CPC-4UB-24-1 |
| Base Pan | 142-56-067 | 142-56-067 | 142-56-070 | 142-56-070 |
| Indoor Coil | 142-08-392 | 142-08-392 | 142-08-396 | 142-08-396 |
| Outdoor Coil | 142-08-388 | 142-08-388 | 142-08-389 | 142-08-389 |
| Compressor | 142-10-282 | 142-10-283 | 142-10-284 | 142-10-285 |
| Compressor Accessories | 142-10-292 | | | |
| Capacitor | 142-25-390 | 142-25-390 | 142-25-372 | 142-25-396 |
| TXV | 142-75-149 | 142-75-149 | 142-75-150 | 142-75-150 |
| Outdor Fan Motor | 142-70-069 | 142-70-069 | 142-70-044 | 142-70-069 |
| Outdoor Coil Mount | 142-56-068 | | 142-56-071 | |
| Drier | 142-75-171 | | | |
| Outdoor Fan | 142-14-042 | | | |
| Outdoor Motor Mount Frame | 142-56-079 | | | |
| Outdoor Motor Mount Frame Support | 142-56-073 | | | |
| Outdoor Motor Mount Lid | 142-56-082 | | 142-56-080 | 142-56-082 |
| Outdoor Motor Mount Strap | 142-56-081 | | | |
| Indoor Blower Motor | 142-70-066 | | | 142-70-067 |
| Blower Wheel | 142-14-022 | | | |
| Blower Housing | 142-14-023 | | | |
| Indoor Motor Mount | 142-70-108 | | | |
| Air Divider | 142-56-415 | | | |
| Indoor Coil Cover | 142-56-647 | | | |
| Indoor Coil Drain Pan | 142-56-098 | | | |
| Air Filter | 142-32-002 | | | |
| Wire Harness Controls | 142-30-024 | | | |
| Power Connecting Plugs | 142-30-026 | | | |
| Compressor Harness | 142-30-057 | | | |
| Contactor | 142-62-101 | | | |
| Transformer 208/240-24V | 142-62-087 | | | |
| 5-Pole Terminal Board | 142-63-062 | | | |
| Low Pressure Switch | 142-65-026 | | | |
| High Pressure Switch | 142-65-027 | | | |
| 3/4" ID Drain Tube | 142-75-616 | | | |


# IMPORTANT!!!

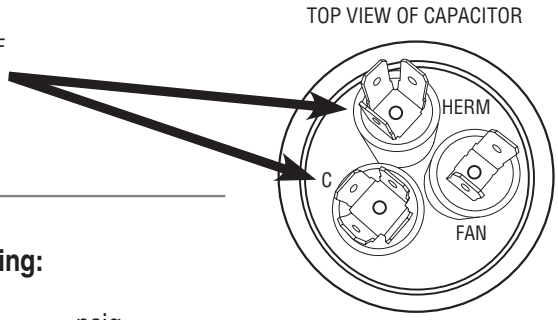
## BEFORE REMOVING A WARRANTY COMPRESSOR, PLEASE FILL OUT THE FOLLOWING AND CALL (800) 523-7138.

**REMOVAL OF COMPRESSOR WITHOUT FACTORY VERIFICATION CAN LEAD TO WARRANTY CREDIT BEING DENIED**

1. Incoming Voltage to Compressor at Contactor is:_____Volts AC
2. Compressor Starting AMP Draw:_____
3. Compressor Winding OHM Reading between Terminals C & S:_____ Ω
4. Compressor Winding OHM Reading between Terminals C & R:_____ Ω
5. Compressor Winding OHM Reading between Terminals R & S:_____ Ω
6. Compressor Winding OHM Reading between Terminals C & Ground:_____ Ω
7. Compressor Winding OHM Reading between Terminals R & Ground:_____ Ω
8. Compressor Winding OHM Reading between Terminals S & Ground:_____ Ω




9. Run Capacitor Reading from HERM to COM:_____ µF
10. Start Capacitor Reading if Used:_____ µF




**11. If the Compressor is Operating Please Indicate the Following:**

Suction Pressure:_____psig Discharge Pressure:_____psig

Super Heat:_____F Subcooling:_____F

NATIONAL® COMFORT PRODUCTS
HEATING & A/C EQUIPMENT

*A Division of National Refrigeration & Air Conditioning Products, Inc.*

539 Dunksferry Road | Bensalem, PA 19020 | 215-244-1400 | 1-800-523-7138

# COMFORT PACK
# LIMITED WARRANTY

**1.** National Comfort Products warrants to its customers that its product shall be free from defects in material and workmanship under normal use and regular service and maintenance as follows:

**HEAT EXCHANGERS** (Gas units only): for twenty years from the date of original installation.

**ALL OTHER PARTS:** For all other parts except the Heat Exchanger, for five years from the date of original installation.

Customer must register the product within 60 days of purchase. If Customer cannot adequately document date of installation, then, for purposes of determining the warranty period, the date of installation shall be 60 days from the date of purchase.

**2.** This warranty does not extend to any damages or losses due to misuse, accident, abuse, neglect, normal wear and tear, negligence (other than National Comfort's), unauthorized modification or alteration; use beyond rated capacity; unsuitable power sources or environmental conditions; improper installation, repair, handling, maintenance or application; damage as a result of fire, wind, floods, lightning, or corrosive conditions; or any other cause not the fault of National Comfort. By way of example and without limitation, the following do not constitute a defect in workmanship and materials and are not covered by this warranty: slugging of liquid refrigerant or oil, unstable line voltage, lightning, operating without proper lubrication, and operating without factory provided safeties. Any installation that impairs or impedes air flow negatively impacts performance and causes premature equipment failure that voids this warranty. For example, installation behind a brick façade or the addition of a brick pattern façade, i.e. pigeon holes impedes air flow and shall void this warranty. No warranty will apply if the input section exceeds the rated input as indicated on the nameplate by more than 5%, or if the heat section in the judgement of the manufacture has been subject to misuse, negligence, accident, corrosive atmospheres, atmospheres contacting any contaminant (silicone, aluminum oxide, etc.), excessive thermal shock, physical damage, impact, abrasion, unauthorized alterations, or operation contrary to the manufacture's printed instructions, or if the serial number has been altered, defaced, or removed.

**3. SOLE WARRANTY**

The warranties identified herein constitute National Comfort's sole and exclusive warranties with respect to the goods and are in lieu of and exclude all other warranties, express or implied, arising by operation of law or otherwise, including without limitation, merchantability and fitness for a particular purpose whether or not the purpose or use has been disclosed to National Comfort in specifications, drawings or otherwise, and whether or not National Comfort's goods are specifically designed and/or manufactured by National Comfort for Customer's use or purpose.

**4. LIMITATION OF REMEDY**

The sole and exclusive remedy for breach of any warranty hereunder (other than the warranty provided herein) shall be limited to repair, replacement, credit or refund of the purchase price to distribution as set forth herein.

National Comfort is not responsible for any other item including but not limited to local transportation, freight, removal of any compressor or part, any labor associated therewith, service or diagnosis calls, refrigerant, or costs for returning any defective compressor or part.

**5. LIMITATION OF WARRANTY**

NATIONAL COMFORT MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, ORAL OR WRITTEN, RELATED TO THE GOODS, INCLUDING ANY WARRANTY OF MERCHANTABILITY OF FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE EXPRESSLY DISCLAIMED. NATIONAL COMFORT SHALL NOT BE LIABLE FOR SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES OR LOSSES FROM ANY CAUSE WHATSOEVER, INCLUDING, WITHOUT LIMITATION, LOSS OF USE, COMMERCIAL PROFITS, OR CUSTOMER GOODWILL, AND ANY OTHER CLAIMS BASED ON CONTRACT OR TORT, WHETHER OR NOT ARISING FROM NATIONAL COMFORT'S NEGLIGENCE.

National Comfort shall not be liable for damages caused by delay in performance and the remedies of Customer set forth in this agreement are exclusive. In no event, regardless of the form of the claim or cause of action (whether based in contract, infringement, negligence, strict liability, other tort or otherwise) shall National Comfort's liability to Customer and/or its customers exceed the price paid by Customer for the specific goods or portion of the goods provided by National Comfort giving rise to the claim or cause of action, and Customer shall indemnify and hold harmless National Comfort for any damages incurred by National Comfort in excess thereof. Customer agrees that in no event shall National Comfort's liability to Customer and/or its customers extend to include incidental, consequential, or punitive damages.

Continued on next page

The term "consequential damages" shall include, but not be limited to, loss of anticipated profits, business interruption, loss of use, revenue, reputation and data, costs incurred, including without limitation, for capital, fuel, power and loss or damage to capital or equipment. Customer agrees that all instructions and warnings supplied by National Comfort will be passed on to those persons who use the Goods. National Comfort's Goods are to be used in their recommended applications and all warning labels adhered to the Goods by National Comfort are to be left intact.

It is expressly understood that any technical advice furnished by National Comfort before or after delivery in regard to the use or application of the Goods is furnished without charge, and National Comfort assumes no obligation or liability for the advice given or results obtained, all advice being given and accepted at Customer's sole risk.

**6. WARRANTY PROCEDURE**

For All Warranty Claims. Customer must register the product with National Comfort within 60 days from purchase. Failure to timely register the product may void the warranty. Any claim for warranty shall be made within thirty days of discovery and in any event, within thirty days from removal of the compressor or part from the unit. Failure to make a timely claim shall void the warranty. Prior authorization from National Comfort is required for all warranty claims. Any claim for warranty must be first reported to National Comfort in writing specifying the unit, serial number, date of purchase and date of original installation. Customer shall also request a Return Material Authorization ("RMA") from National Comfort to initiate the warranty claim process. Issuance of an RMA by National Comfort is not an acknowledgment that the defect is covered by this Warranty. Any replacement compressor or part is warranted for the original product warranty, or for one year from the date of shipment of the replacement compressor/part, whichever is later.

**A. Heat Exchangers.** In addition to the above-reference requirements, customer is also required to purchase a replacement heat exchanger and return the original heat exchanger to National Comfort at National's discretion, freight prepaid. If National Comfort determines that there is a defect in material or workmanship in the heat exchanger that is covered by this Warranty, then National Comfort shall credit Customer for the cost of the new replacement heat exchanger. If National Comfort determines that the defect in material or workmanship is not covered by this Warranty, then no credit shall be issued. A copy of the invoice of the replacement heat exchanger and completed RMA must accompany the original heat exchanger for which warranty is claimed. National Comfort reserves the right to request additional documentation. The failure to follow this procedure shall render the warranty void.

**B. Compressors**. In addition to the above-referenced requirements, Customer is also required to purchase a replacement compressor and return the original compressor to National Comfort at National's discretion. If the defect is reported to National Comfort within one year from the date of original installation or within 20 months from the date of manufacture of the compressor (as determined by the compressor serial number), whichever occurs first, then Customer may take the compressor to any Authorized Copeland Distributor for replacement of said compressor. If the defect is reported to National Comfort after one year from the date of installation or after 20 months from the date of manufacture of the compressor (as determined by the compressor serial number), whichever occurs first, but before the expiration of five years from the date of installation, then the compressor should be returned to National Comfort at National's discretion and Customer shall purchase a new compressor. If National Comfort determines that there is a defect in material or workmanship that is covered by this Warranty, then National shall credit Customer for the cost of the new replacement compressor. If National Comfort determines that the defect in material or workmanship is not covered by this Warranty, then no credit shall be issued. A copy of the invoice of the replacement compressor and completed RMA must accompany the compressor. National Comfort, at its sole discretion, may also require Customer to supply the compressor tag. The failure to follow this procedure shall render the warranty void.

**B. Other Parts.** In addition to the above-referenced requirements, Customer is required to purchase a replacement part for the original part for which Customer is making a warranty claim. The original part for which warranty is claimed is to be returned to National Comfort at National's discretion, freight prepaid. If National Comfort determines that there is a defect in material or workmanship in the part that is covered by this Warranty, then National Comfort shall credit Customer for the cost of the new replacement part. If National Comfort determines that the defect in material or workmanship is not covered by this Warranty, then no credit shall be issued. A copy of the invoice of the replacement part and completed RMA must accompany the original part for which warranty is claimed. National Comfort reserves the right to request additional documentation. The failure to follow this procedure shall render the warranty void.

**7. SHIPPING INSTRUCTIONS**

**A. Compressors**. Returned compressors must be totally secured by use of shipping lugs taken from the replacements compressors and clearly marked with the RMA number. Do not use tape, rags or putty to seal the compressor. Line connections should be sealed with rubber plugs. All compressors must be securely bolted, banded, and stretch wrapped to a skid in the upright position.

**B**. **Parts.** All other returned parts must be securely packaged and clearly marked with its corresponding RMA number provided from NCP.



National Comfort Products
A Division of National Refrigeration and Air Conditioning Products, Inc.
539 Dunksferry Road | Bensalem, PA 19020-5908
(800) 523-7138
www.nationalcomfortproducts.com

5 YEAR WARRANTY ON PARTS

5 YEAR WARRANTY COMPRESSOR

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