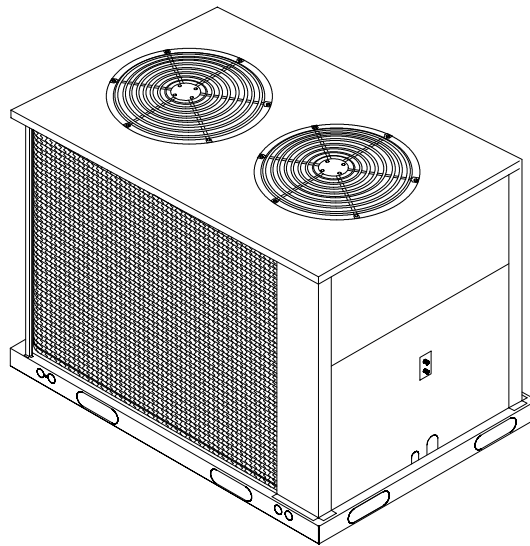


Installation Instructions



CAC / ACC Series
12-1/2 to 20 Ton

Commercial Split Condensers



SAFE INSTALLATION REQUIREMENTS

WARNING

Installation or repairs made by unqualified persons can result in hazards to you and others. Installation **MUST** conform with local building codes or, in the absence of local codes, with the the National Electrical Code NFPA 70/ANSI C1-1993 or current edition and Canadian Electrical Code Part 1 CSA C.22.1.

The information contained in this manual is intended for use by a qualified service technician familiar with safety procedures and equipped with the proper tools and test instruments.

Failure to carefully read and follow all instructions in this manual can result in equipment malfunction, property damage, personal injury and/or death.

CAUTION: Improper installation, adjustment, alteration, service or maintenance can void the warranty.

The weight of the condensing unit requires caution and proper handling procedures when lifting or moving to avoid personal injury. Use care to avoid contact with sharp or pointed edges.

Safety Precautions

1. Always wear safety eye wear and work gloves when installing equipment.
2. Never assume electrical power is disconnected. Check with meter and disconnect.
3. Keep hands out of fan areas when power is connected to equipment.
4. R-22 causes frost-bite burns.
5. R-22 is toxic when burned.

NOTE TO INSTALLING DEALER: The Owners Instructions and Warranty are to be given to the owner or prominently displayed near the indoor Air Handler Unit.

Before Installation

Inspect the unit for damage before installing. Check the unit rating plate for correct model number and voltage requirements of job site before installation.

Foundation Construction

Zoning ordinances may govern the minimum distance the condensing unit can be installed from the property line. Check before proceeding.

The remote condensing unit is to be installed on a solid foundation. This foundation should extend a minimum of 2" beyond the sides of the condensing unit and must be level. This foundation can be a precast slab. It can also be a monolithic poured slab. To eliminate the possibility of noise

transmission, the foundation slab should NOT be in contact with or be an integral part of the building foundation.

NOTE: At no time should the condensing unit be set on bricks or concrete blocks.

Condensing Unit Location

These units are designed with "top discharge" condenser air movement. The condenser air is taken in through the condenser coil and is discharged out the top.

For quiet operation and maximum efficiency, eliminate any obstructions which might interfere with air discharge.

After making allowances for zoning ordinances, care should be exercised not to locate the condensing unit immediately adjacent to sleeping areas or in corners where operating noise levels can be amplified. Select a location as reasonably close to the indoor unit as possible to avoid any long refrigeration line runs. Place the unit so there is a minimum of 24" between the building and the service panel of the unit to allow for service.

Ensure there is a minimum of 12" between the coil inlet and the building wall, other structure or shrubs.

CAUTION: DO NOT install unit below an overhang that does not have guttering. A minimum vertical clearance of 60" is required to overhang.

Roof Top Installations

If it is necessary to install units on a roof structure, be sure to elevate and level the units. Ensure the roof structure and anchoring method are adequate for unit location. Consult local codes regarding rooftop mounting.

NOTE: When condensing unit is to be installed on a bonded guaranteed roof, a release must be obtained from the building owner to free the installer from all liabilities.

Hoisting

CAUTION

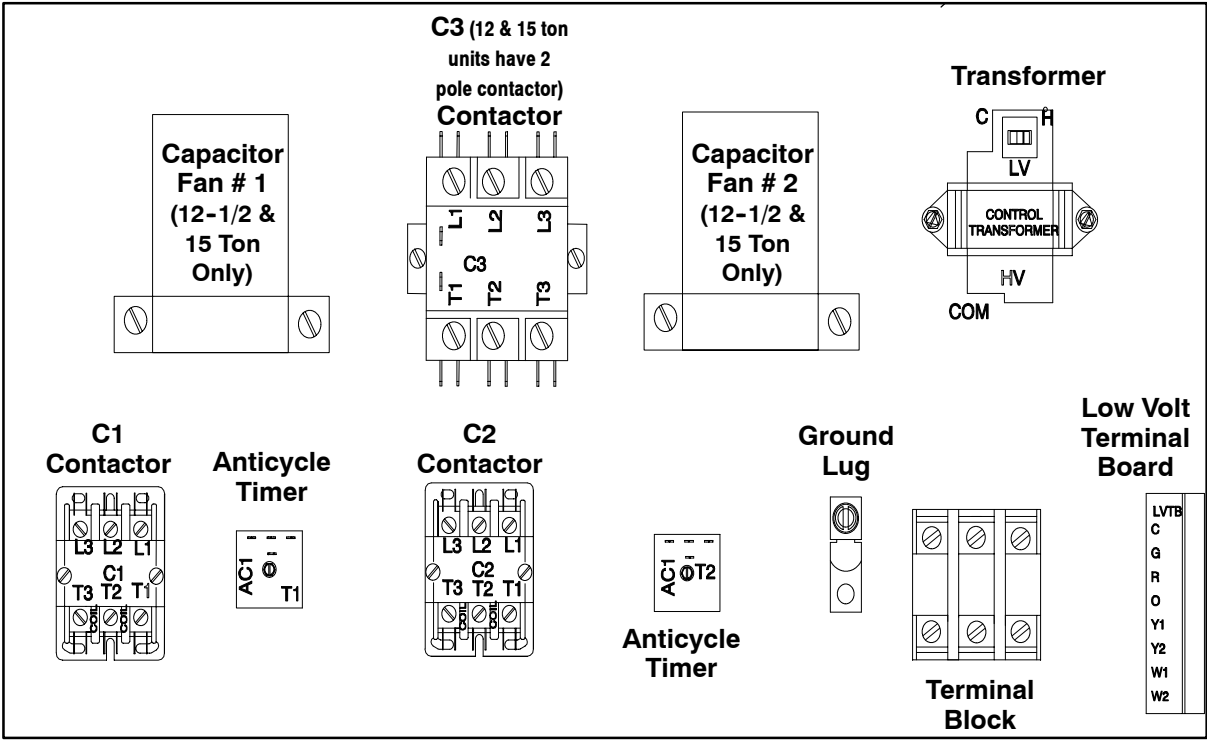
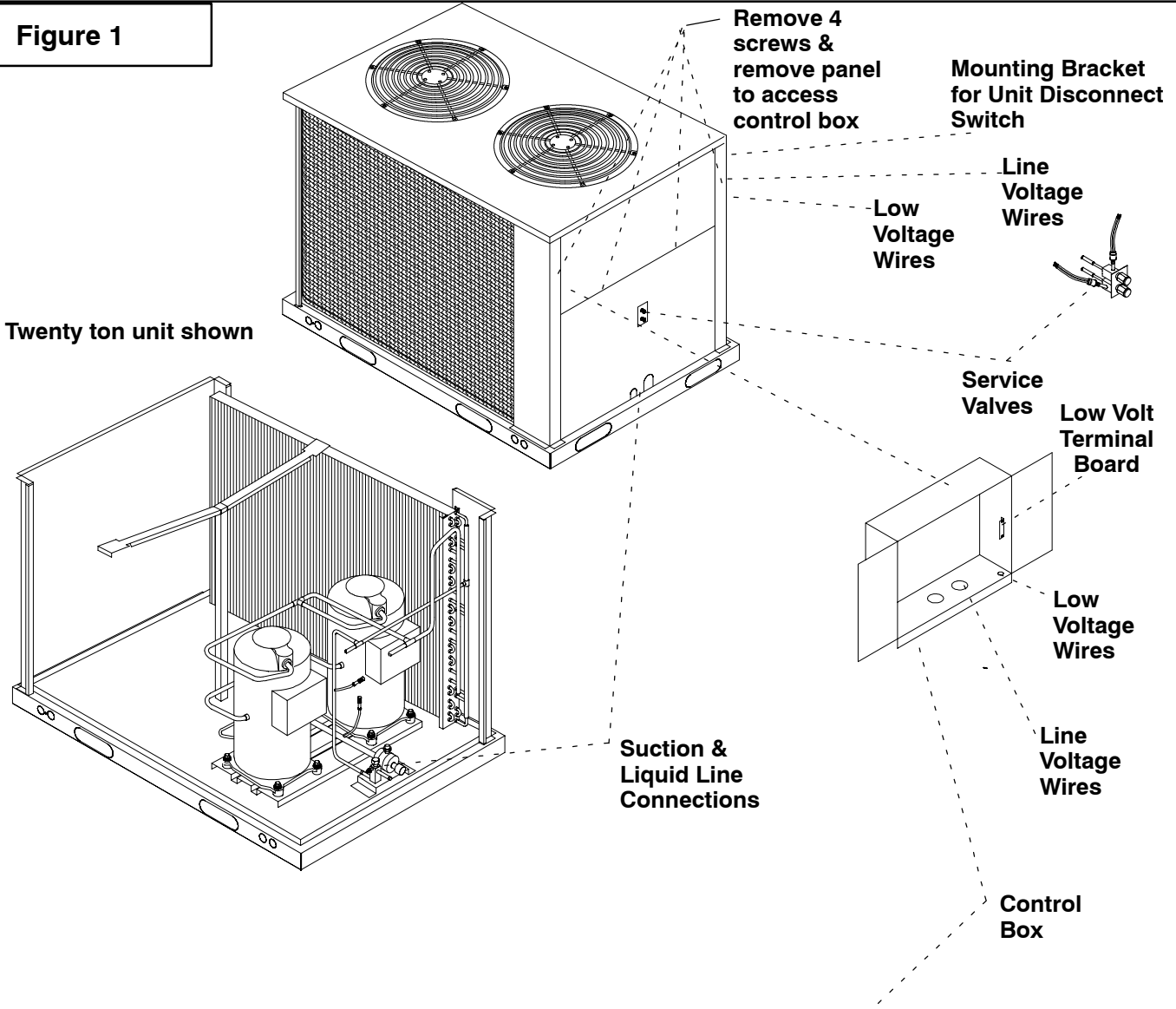
When hoisting unit, at least two slings and two spreader bars MUST be used to prevent damage to unit.

NOTE: All access panels **MUST** be secured in place before hoisting.

The unit should be hoisted with two lifting slings. Attach the slings to rigging shackles that have been hooked through holes in the base rail.

Two spreader bars **MUST** be placed on top of the unit to protect the unit from damage from the pressure exerted by the slings. Make sure that all equipment is adequate to handle the weight of the unit and that the slings will not allow the unit to shift.

Figure 1



Refrigerant Piping

NOTE: All refrigerant piping MUST comply with applicable local, state and national safety codes. Use only refrigeration grade copper tubing Type K or L which is internally clean and damage free.

General NOTES:

Run refrigerant lines should be installed so as to prevent excessive vibration and strains at joints and connections. Lines shall be securely fastened to a permanent support within 6 feet following the first bend from the compressor, and within 2 feet of each other bend or angle. Lines should be supported at points not more than 15 feet apart. Lines should be installed so that it is not subject to damage from an external source.

Vertical separation of indoor and outdoor sections MUST NOT exceed 60' (18.3m).

Refrigerant lines MUST NOT exceed the lengths specified in **Figure 2**. Contact place of purchase for recommended procedures if either of the line lengths are too short for a particular site.

Figure 2 Unit Size (Ton)	Recommended Line Sizes (Max. Equivalent Feet of Copper Tubing, Type L or K)			
	Suction Line Size O.D. Copper		Liquid Line Size O.D. Copper	
	1-3/8"	1-5/8"	5/8"	7/8"
12-1/2	70'	160'	35'	200'
15	35'	80'	16'	100'
20	-	50'	-	60'

Equivalent line lengths in the above table are suitable for a unit operating at 40°F sat. suction, 50°F return gas and 95°F ambient.

Design

NOTE: Piping design is the most important step in ensuring trouble free operation with maximum performance.

Properly design piping to achieve maximum system capacity with minimum installation costs and minimum refrigerant charges while providing proper refrigerant control. This will provide maximum system load flexibility without compressor lubrication and temperature problems and provide minimum power consumption due to efficient compressor operation.

Oil Trapping

Horizontal Suction Lines

Pitch horizontal suction lines downward in the direction of refrigerant flow in cooling mode to aid in oil drainage. Downward pitch MUST be at least 1/2" per 10'.

If indoor coil is above the outdoor unit, pitch horizontal runs down to the outdoor section.

Vertical Suction Risers

It is recommended that vertical suction risers not be upsized. Proper oil return to the compressor should be maintained with suction gas velocity. If velocities drop below 1500 fpm (feet per minute), oil return will be decreased. An oil trap should be installed every 20' of vertical suction line riser (condenser above evaporator.) Refer to line sizing charts.

Line Valves

The outdoor condensing unit is supplied with straight sweat brass service valves.

All line valves are positioned to seal the refrigerant in the condensing unit with gauge ports open to connecting lines when the Schraeder valve is depressed. Gauge ports have Schraeder installed and require use of charging hoses with depressors. Do not heat valve body above 250 degrees F.

Brazing Connections

WARNING

Fire Hazard

Refrigerant and oil mixture under pressure could ignite as it escapes and contacts brazing torch resulting in Fire. Make sure the refrigerant charge is properly removed from both the high and low sides of the system before brazing any component or lines.

FAILURE TO DO SO COULD RESULT IN BODILY INJURY OR DEATH.

Before making braze connections, be sure all joints are clean. Before heat is applied for brazing, nitrogen should be flowing through the tubing to prevent oxidation and scale formation on the inside of the tubing.

Liquid & Suction Lines

Fully annealed refrigeration lines should be used when installing the system.

The coil may also be checked for leaks using pressure and/or halide torch or electronic leak detector.

The following is the recommended method for making braze connections at the refrigerant line connections:

1. Clean refrigerant tube end with emery cloth or steel brush.
2. Use a suitable brazing alloy for copper to copper joints.
3. Insert tubing into swage fitting connection.
4. Apply heat absorbing paste or heat sink product to prevent damage to the service valve.
5. Braze joint.
6. Quench the joint and tubing with water using a wet rag. Leave rag on fitting body and re-wet with water to help cool area.

Evacuating, Charging, and Leak Testing

NOTE

Intentional release of CFC or HCFC Refrigerant to the Atmosphere violates Federal Law. It may also violate State and Local Codes. Check all Federal, State and Local Codes before proceeding.

Correct evacuation and charge are vital for proper performance and compressor life.

NOTE: Do not use any portion of the charge for purging or leak testing. It is mandatory that a thorough evacuation of the refrigerant in the piping and evaporator be performed.

The liquid line and suction line service valves have been closed after final testing at the factory. **Do not disturb these valves until the lines have been leak checked and evacuated or the charge in the unit may be lost.**

The unit is shipped with a 10 oz. R-22 holding charge to allow installation of interconnecting lines without purging the unit prior to charging the system.

1. Remove access caps from service valve ports.
2. Attach manifold gauge hoses to liquid and suction gage ports.
3. Pressurize system to 40–50 psig and leak test all connections. Use an Electronic Leak Detector, a halide Torch or coat the connections with liquid detergent. If using detergent watch for a constant forming of bubbles. They indicate a leak. If a leak is found, check the connections for tightness or re-braze.
4. Connect vacuum pump to manifold gauge set and evacuate to 500 microns vacuum through both sides of the line set. All leaks must be repaired.
5. Close valve to vacuum pump and shut off vacuum pump. When system is balanced (3 minutes) and gauge doesn't go above 500 microns, close all gauge valves.
6. Open the liquid and suction valves. Add proper amount of refrigerant.
7. Re-install access caps on service valves.
8. Re-install gauge port caps and check for leaks. Tighten valve core and the gauge port caps if leak is found. (Over-tightening valve core or caps will damage the gauge ports.)

Valve Actuation: Service Valves

A) After evacuation of the connecting lines, remove the service valve cap and fully insert the hex wrench into the stem. A back-up wrench is required on the valve body to open the valve stem (not required on ball valves.) Backout counterclockwise until the valve stem just touches the retaining ring. NOTE: THIS IS NOT A BACKSEATING VALVE. Care must be taken to prevent dislodging retainer ring when opening valve. Some models have ball type suction valves that can be opened with a 6" crescent wrench by rotating the valve stem 90° counter clockwise.

B) Replace service valve cap and torque to; 12–16 ft. lbs. on 5/8", and 15–21 ft. lbs on 7/8" valves, 6–8 ft. lbs. on ball valves.

NOTE: The cap is the primary seal and must be tightened to prevent leaks.

C) Torque gauge port cap 6–8 ft. lbs.

REFRIGERATION PIPING & CHARGING

The recommended method of addition or removal of refrigerant is by weight.

For oil requirements, add 1 oz. of oil for every 100 feet of line set over 100 feet. For piping lengths up to 50 feet refer to **Figure 3** for pipe size, and **Figure 4** for refrigerant adjustment.

On applications where liquid floodback to the compressor is likely to occur, use of a suction line accumulator is recommended.

Figure 3 - LINE SIZING (Up to 50' length line sets)

Model Size - Ton	Liquid	Suction
12-1/2	5/8"	1-3/8"
15	5/8"	1-3/8"
20	7/8"	1-5/8"

Figure 4 - Addition of Refrigeration Charge

Liquid Line Diameter	oz. Per Linear Ft.
5/8	1.9
7/8	3.25

Electrical Connections

WARNING

Electrical shock hazard.

Turn OFF electric power at fuse box or service panel before making any electrical connections and ensure a proper ground connection is made before connecting line voltage.

Failure to do so can result in property damage, personal injury and/or death.

Be sure to check all Local Codes to determine that the unit is installed in accordance with Local requirements. Consult the National Electric Code for wire size requirements.

Line voltage connections are made at the line side of the terminal block in the electrical box of the condensing unit. **See Figure 1.** The unit should be wired through a properly sized fused disconnect switch. Provisions have been made on the side of the unit for mounting a disconnect box. Follow the appropriate wiring diagram attached to the inside of the access door of the condensing unit.

Proper fusing recommendations are also indicated on the Unit Rating Plate. However, in general, the best fuse for any unit is the smallest fuse that will hold the equipment on the line under normal use and service without nuisance tripping breakers or blowing of fuses. Time-delay fuses such as fuse-tron, or fuse-stat are recommended to prevent blowing due to starting current (the current in-rush when the equipment starts is referred to as the Locked Rotor Amps or LRA). A fuse of this kind sized properly, will give maximum equipment protection. Use 60°C wire or higher.

NOTE: Three Phase Units - If the units are wired incorrectly, they will try to run backwards. The compressor will make a loud bang when started and then shut down if the phase is wrong on the wiring.

Ground Connections

A ground lug is installed on the electrical control panel (**See Figure 1**). Run a copper conductor of the appropriate size from the ground lug to a grounded connection in the electrical service panel. Check all ground connections to ensure that they are tight.

Line Voltage Wiring

Do NOT complete line voltage connections until unit is permanently grounded. All line voltage connections and the ground connection MUST be made with copper wire.

Line Voltage Connections

Line voltage wires enter the unit through the knockout located on the right front of the unit just under the disconnect box mounting bracket and then enter the bottom of the control box. **See Figure 1.** Complete the line service connections to the terminal block in the electrical control box. For access, remove the control box panel (**See Figure 1**). Refer to the wiring diagram for connection information.

Low Voltage Connections

Low voltage wiring connections for the thermostat enter the unit at the right front just under the disconnect box

mounting bracket. Remove the temporary plug and install thermostat wire with appropriate strain relief. Thermostat connections are made at the low voltage terminal board (**See Figure 1**) in the control box. Refer to the wiring diagram and instructions included with the thermostat.

Indoor Coil

Make connections to indoor blower coil. Refer to Indoor Coil manual for additional information.

Wiring Check

After wiring is completed, check all electrical connections, including factory wiring, to ensure that all connections are tight. Replace and secure control box access panel before leaving the unit or turning on electric power.

Start-up Procedure

WARNING

Electrical shock hazard.

Turn OFF electric power at fuse box or service panel before making any electrical connections and ensure a proper ground connection is made before connecting line voltage.

Failure to do so can result in property damage, personal injury and/or death.

Cooling Checks

NOTE: Some thermostats may have a time delay or other features that will require changes in the check-out procedure.

1. Ensure that electric power to both indoor and outdoor units is shut OFF.
2. Set thermostat Heat-Cool selector to OFF.
3. Set thermostat fan switch to AUTO.
4. Turn ON electric power to both units. Nothing should start running. If any unusual arcing, odors or noises are encountered, shut OFF electric power immediately and check for wiring errors or obstructions in or near fans and motors.
5. Set thermostat fan switch to ON. The indoor blower should run.

NOTE: Check for proper indoor blower rotation.

6. Set thermostat fan switch to AUTO. The indoor blower should shut OFF.

Allow unit to stay in this mode for at least six hours to allow the crankcase heater to evaporate any liquid refrigerant that is in the compressor oil.

7. Set thermostat above room temperature. Set thermostat Heat-Cool selector switch to COOL. Set thermostat below indicated room temperature. The contactor will close at the condensing unit and the indoor blower should start running.

The compressors and outdoor fans(s) will run. If any unusual arcing, odors or noises are encountered, shut OFF electric power immediately and check for wiring errors or obstructions in or near fans and motors. Check for proper rotation of fan motors. Fans should pull air in through the condensing coil and blow out through the top grills. If motors operate in reverse rotation, line polarity of 3 phase power must be changed.

NOTE: The compressors have a five minute anti-cycle delay that is activated whenever the compressors are shut off. For instance, if the unit is manual shut off when the compressors are running and the unit is turned back on two minutes later, it will be an additional three minutes before the compressors will restart.

8. With the unit operating, close all doors, windows and other openings in the building. Set the thermostat to the desired setting. The unit may run several hours or even a full day to reduce the initial heat and moisture in the building. This is normal for any air conditioning system.

9. After the unit has been operating for an hour or more, check ductwork for sweating. If ductwork is sweating, additional insulation with a vapor barrier is required.

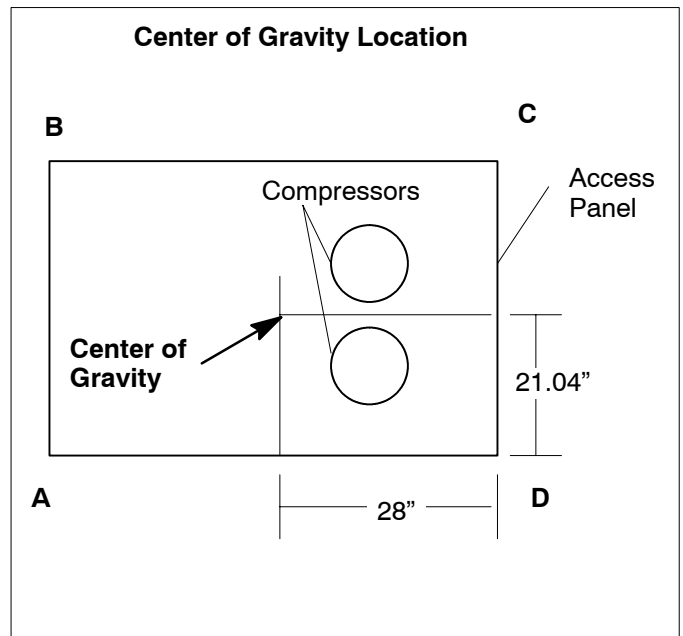
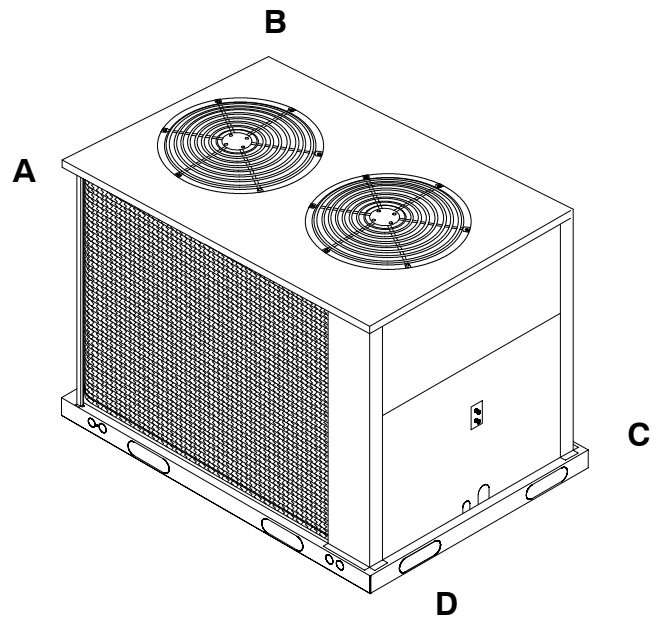
10. Ensure that condensate is draining properly from indoor unit.

Unit Maintenance

The unit should be inspected and cleaned on an annual basis by a qualified technician. This should include checking for adequate clearances, electrical connections, duct connections / blockages, air filters, air flow, lubrication, and operational performance of system. **Coils may require cleaning. The coil should always be cold when cleaning. Use an alkaline based cleaner only. Cleaning a hot coil or using an acid based cleaner will remove the paint from the fins and may clog the coil.**

CORNER WEIGHTS (LBS)

UNIT SIZE (Ton)	A	B	C	D	OPERATING WEIGHT TOTAL
12-1/2	114	114	164	164	555
15	165	165	238	238	807
20	182	182	262	262	888



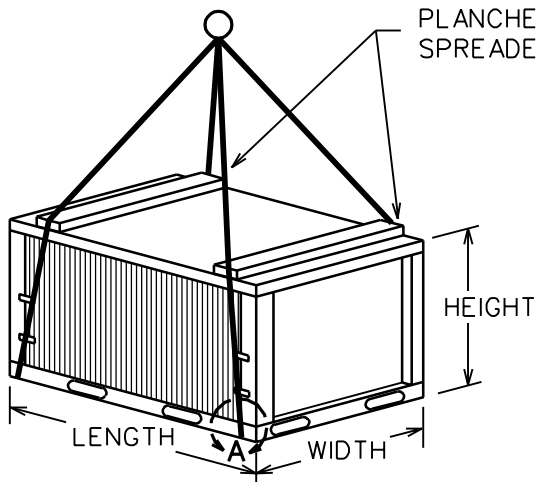
INSTRUCTIONS DE SOULEVAGE



AVERTISSEMENT

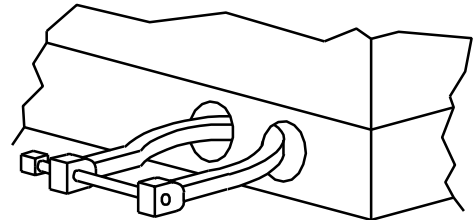
SI CET AVERTISSEMENT N'EST PAS RESPECTÉ, IL PEUT EN RÉSULTER DES DÉGÂTS MATÉRIELS, DES DOMMAGES CORPORELS OU LA MORT.

- TOUS LES PANNEAUX DOIVENT ÊTRE EN PLACE AU MOMENT DU MONTCHARGE ET SOULEVAGE.
- ACCROCHEZ LES CHAINES DE SOULEVAGE A TRAVERS LES TROUS DE LA BARRE DE BASE, COMME LE MONTRE DETAIL -A.
- UTILISEZ DES PLANCHES D'ÉLARGISSEMENT AU MOMENT DU SOULEVAGE POUR ÉVITER DES DOMMAGES À L'APPAREIL.
- ASSUREZ QUE LE MONTECHARGE ET LES CHAINES DE SOULEVAGE SONT SUFFISANT POUR MANOEUVRER LES POIDS ÉNUMÉRÉS.



PLANCHES D'ÉLARGISSEMENT
SPREADER BARS

DETAIL - A



CAPACITY	LENGTH		WIDTH		HEIGHT		POIDS/WEIGHT	
	IN	MM	IN	MM	IN	MM	LB	KG
12.5 TONS	69.00	1753	43.00	1092	49.50	1257	600	273
15 TONS	69.00	1753	43.00	1092	49.50	1257	850	386
20 TONS	69.00	1753	43.00	1092	51.50	1308	950	432

RIGGING INSTRUCTIONS



WARNING

FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN PROPERTY DAMAGE, BODILY INJURY OR DEATH.

- ALL PANELS MUST BE IN PLACE WHEN RIGGING AND LIFTING.
- HOOK RIGGING SHACKLES THROUGH HOLES IN BASE RAIL, AS SHOWN IN DETAIL -A.
- USE SPREADER BARS, WHEN RIGGING, TO PREVENT UNIT DAMAGE.
- BE SURE RIGGING AND SHACKLES ARE SUFFICIENT TO HANDLE WEIGHT LISTED.

1097929

INTERNATIONAL COMFORT PRODUCTS
LIMITED WARRANTY CERTIFICATE
For Cooling & Heating Products

SAVE THIS CERTIFICATE. It gives you specific legal rights, and you may also have other rights which may vary from state to state and province to province.

If your unit needs servicing, contact a qualified dealer or qualified service technician of your choice. When requesting service, please have the model and serial number from each unit in your heating and/or cooling system readily available. If your dealer needs assistance, the distributor is available to provide support and we, in turn, support its efforts.

Fill in the installation date and model and serial numbers of the unit in the space provided below and retain this Limited Warranty for your files.

GENERAL TERMS

Subject to the conditions and limitations stated herein, during the term of this Limited Warranty, we will provide a replacement for any functional component part (as defined below) of your unit found to be defective in materials or workmanship. The term of this Limited Warranty is five years from installation on Residential Products and one year from installation on Commercial Products. Except as otherwise stated in the "Additional Terms" section, this Limited Warranty covers only the original purchaser and subsequent transferees, and only while the unit remains at the site of the original installation (except for mobile home installations), and only if the unit is installed inside the continental United States, Puerto Rico, Alaska, Hawaii or Canada. In addition, the Limited Warranty applies only if the unit is installed and operated in accordance with the printed instructions accompanying the unit, and in compliance with all applicable installation and building codes and good trade practices. As used in this Limited Warranty, "installation" means the original installation of the unit.

THERE ARE EXCEPTIONS to this Limited Warranty as described on the reverse side of this page. All replacement parts will be warranted for the unused portion of the warranty coverage period on the unit. The part to be replaced must be returned by the dealer to a distributor that sells products for International Comfort Products, in exchange for the replacement part. In lieu of providing a replacement part, we may, at our sole option, refund to you an amount equal to the distributor's component purchase price from us, or provide to you a credit equal to that amount to be applied toward the purchase of any new unit that we distribute. If a credit for a new unit is given in lieu of a replacement part, the rating plate from the unit being replaced must be submitted on a warranty claim, and your dealer must make the unit being replaced available to our distributor for disposition. As a condition to warranty coverage, the unit must receive yearly maintenance, as described in the owner's manual, by a dealer. Satisfactory proof of yearly service by a dealer may be required.

"Functional component parts" include only the following: blower motor, unit-mounted sensors & timers, condenser motor, evaporator coil, condenser coil, condenser fan, capacitor, transformer, single-phase strip heat elements, expansion device, reversing valve, solenoid valve, service valve, electronic and electro-mechanical control board, ignitor, ignition module, draft inducer assembly, burner pilot, gas valve, limit control, pressure switch, relays and contactors, blower wheel, interlock switch, crosslighter, pilot shield, gas & oil burners, oil pump assembly, accumulators and factory installed driers and strainers.

This Limited Warranty **DOES NOT COVER** any labor, material, refractory chambers, oil nozzles, refrigerant, refrigerant inspection and refrigerant reclaiming, freight and/or handling charges associated with any repair or replacement and such charges will be your responsibility.

To establish the installation date for any purpose under this Limited Warranty, you must retain the original records that can establish the installation date of your unit. If you do not provide such documents the start date of the term of this Limited Warranty will be based upon the date of unit manufacture, plus thirty (30) days. In establishing that the required yearly service has occurred, you must furnish proof of yearly service by a qualified service technician.

This Limited Warranty does not cover: (a) failure or damages caused by accident, abuse, negligence, misuse, riot, fire, flood, or Acts of God (b) damages caused by operating the unit where there is a corrosive atmosphere containing chlorine, fluorine, or any other damaging chemicals (other than those found in a normal residential environment) (c) damages caused by an unauthorized alteration or repair of the unit affecting its stability or performance (d) damages caused by improper matching or application of the unit or the unit's components (e) damages caused by failing to provide proper maintenance and service to the unit in accordance with this Limited Warranty Certificate and the printed instructions originally provided with the unit (f) any expenses incurred for erecting, disconnecting, or dismantling the unit (g) parts or supplies used in connection with service or maintenance, such as refrigerant, refractory chambers, oil nozzles, filters, or belts (h) damage, repairs, inoperation or inefficiency resulting from faulty installation or application (i) electricity or fuel costs or any increase in electricity or fuel cost whatsoever including additional or unusual use of supplemental electric heat (j) units which have not had the required yearly maintenance described elsewhere in this limited warranty.

In no event shall we be liable for any incidental, consequential, or special damages or expenses in connection with any use or failure of this unit.

We have not made, do not make, and hereby disclaim any implied condition or implied warranty of fitness for a particular use or purpose, and any implied condition or implied warranty of merchantability, to the fullest extent allowed by law. We make no express or implied warranties except as stated in this Limited Warranty certificate.

No one is authorized to change this Limited Warranty or to create for us any other obligation or liability in connection with this unit. Any implied warranties shall last for the term of the expressed warranty contained herein. Some states and provinces do not allow the exclusion or limitation of incidental or consequential damages or do not allow limitations on how long an implied warranty or condition lasts, so the above limitations or exclusions may not apply to you. The provisions of this Limited Warranty are in addition to and not a modification of or subtraction from any statutory warranties and other rights and remedies provided by law.

Please refer to reverse side of this page for additional terms.

Model No. _____

Serial No. _____ Date Installed _____

Effective on units installed After July 1, 2002.

USA: International Comfort Products Corporation (USA) • 650 Heil-Quaker Avenue • P.O. Box 128 • Lewisburg, Tennessee 37091 • (931-270-4100)
CANADA: International Comfort Products division of UTC Canada Corporation • 6060 Burnside Court, Unit 1, Mississauga, Ontario L5T 2T5 (905-795-8113).

Manufacturers of Airquest, Arcoaire, Clare, Comfortmaker, Dettson, Heil, Keeprite, Lincoln, Tempstar and other quality brand name private label products.

Part No. 401 06 1010 18 (Orig. 8/9/2002)

ADDITIONAL TERMS FOR RESIDENTIAL APPLICATIONS ONLY

The Additional Terms for the components listed below are in addition to, and subject to, the General Terms on the reverse side of this page. Warranty coverage is limited to parts that fail due to defect in materials or workmanship during the specified term.

CENTRAL GAS & OIL FURNACE HEAT EXCHANGERS*

Gas Model Series: C9MPV, H9MPV, T9MPV, C9MPT, H9MPT, T9MPT, C9MPD, H9MPD, T9MPD: Limited Lifetime Warranty on heat exchangers. If a heat exchanger on one of these furnaces fails due to defect in the part, we will provide a replacement part or, at our option, credit toward the purchase of a new furnace manufactured by us. This additional Limited Warranty runs only to the original purchaser, and lasts only for as long as the original purchaser lives in the home where the furnace is initially installed.** It is not transferable to any subsequent owner. If the furnace was not installed in the home owned by the original purchaser, if the original purchaser sells the home to a subsequent owner, or if proof of original purchase cannot be provided, then the limited warranty is only for 20 years from the date of original installation.

Gas Model Series: GDL, GNL, TNE, TDE, NTC7, NDC7, NTP6, NDP6, TDE, NTV6, VNE: A replacement heat exchanger will be provided for any heat exchanger that fails in one of these furnaces due to defect for 25 years from the original date of installation.

Gas Model Series: NTC6, GNE, GDE, NDN6, NTG3, NDN3, FBF, NBF, NDF, NTN3, NTN6, NNE, N9MP1, N9MP2, FUH: A replacement heat exchanger will be provided for any heat exchanger that fails in one of these furnaces due to defect for 20 years from original date of installation.

Oil Model Series: OLR(105, 160, 182), OCF, OLF, OUF, NOLF, NOUF, OLB, OHB, ODH, FLO, MBO, LBO, NOME: Limited Lifetime Warranty on heat exchangers. If a heat exchanger on one of these furnaces fails due to defect in the part, we will provide a replacement part or, at our option, credit toward the purchase of a new furnace manufactured by us. This additional Limited Warranty runs only to the original purchaser, and lasts only for as long as the original purchaser lives in the home where the furnace is initially installed.** It is not transferable to any subsequent owner. If the furnace was not installed in the home of the original purchaser, if the original purchaser sells the home to a subsequent owner, or if proof of original purchase cannot be provided, then the limited warranty is only for 20 years from the date of original installation.

Oil Fired Floor Furnace: NFO: A replacement heat exchanger will be provided for any heat exchanger that fails due to defect for 10 years from installation with the following limitation: during the sixth through tenth year, any credit toward your purchase of a component or toward the purchase of any new unit will be in an amount equal to the distributor's purchase price reduced by 20 percent for each year after the fifth year.

ADDITIONAL TERMS FOR OIL FURNACE APPLICATIONS ONLY

- 1) OIL BURNERS - A replacement for 5 years from date of original installation for Oil Burner Parts.
- 2) OPTIONAL ACCESSORIES AND FUNCTIONAL PARTS: A replacement for 5 years from date of original installation. (Refractory and oil nozzles not included)

GAS/ELECTRIC PACKAGED UNITS HEAT EXCHANGERS

Model series: PGAD, PGAA, PGMD, PGME, PGF, GPFM, PGC, GPCM: A replacement for 10 years from original date of installation.

COMPRESSORS:*

1) **Premium Model Units: HAC0, HAC2, HAC4, CAC0, CAC2, CAC4, KAC0, TCA0, TCA2, TCA4, HHP0, HHP2, HHP4, CHP0, CHP2, CHP4, TCH0, TCH2, TCH4, PGME, PYMC, PHAD, PGAD, PA95, PAPC, PAK, APK:** To the original purchaser a replacement for 10 years from original date of installation, only if the unit is installed with factory matched coils, except air conditioner condensing units with a nominal SEER of 10 may be matched with evaporator coils of the same nominal tonnage regardless of manufacturer and in accordance to factory recommendations. This limited 10-year warranty is not transferable to any subsequent owner. HOWEVER, if the unit was not installed in the home owned by the original purchaser, if the purchaser sells the home to a subsequent owner, or if proof of original purchase cannot be provided, then the limited warranty is only for 5 years from the original date of installation.**

2) **All Other Models: Air Conditioners, Heat Pumps, & Combination Gas/Electric Units: NAC0, NAC2, NHP0, NHP2, AO, A2, HO, H2, PGF, PGC, GPFM, GPCM, PAF, APFM, PHF, HPFM, PGAA, PGMD, PA55, PH55, PAPA, PYPA:** A replacement for 5 years from date of original installation, only if: (a) air conditioner condensing units with SEER rating in the range of 10 to 11 SEER are matched with evaporator coils of the same nominal tonnage regardless of manufacturer and in accordance to factory recommendations, or (b) heat pump condensing units are used with factory matched coils, unless written approval to do otherwise is obtained from manufacturer.

ADDITIONAL TERMS FOR COMMERCIAL APPLICATIONS ONLY

For purposes of this warranty a commercial application is one in which: the product has over 5 tons nominal cooling capacity, or is designed for operation with 3 phase electrical power, or is installed in a commercial establishment such as a beauty or hair salon, hospital, school, restaurant, church, hotel etc..

3-Phase Models: PGF, GPFM, GPF, PGAD, PGME, PGB, PGMG, PGMF, PGS, PGE, APE, PAE, PAB, PAMD, PAS, PAF, APFM, APF, PHB, PHE, PYMD, HPB, PHS, CAC, ACC, CAE, ACE, CHC, HCC, CHE, HCE:

The additional Terms of the components listed below are in addition to and subject to the General Terms on the reverse side of this page.

- 1) **GAS FIRED HEAT EXCHANGERS (ALL MODELS):*** A replacement for 10 years from date of original installation.
- 2) **COMPRESSORS (ALL MODELS):*** A replacement for 5 years from date of original installation.
- 3) **OPTIONAL ACCESSORIES AND FUNCTIONAL COMPONENT PARTS (ALL MODELS):***
A replacement for 1 year from date of original installation.
- 4) **COMMERCIAL OIL MODELS: OLR210, OLR350, OTF210, AMT3, AMT4, AMP3:** Ten(10) Year Limited Warranty on heat exchangers.
*To receive advantage of your limited warranty, you must provide proof of yearly service by a qualified service technician.
**To receive advantage of your warranty, you must retain the original records that can establish the installation date and proof of purchase of the unit.

MINI SPLITS:

Summary - Mini Splits Warranted for one (1) year on all replacement parts.

Additional terms for Mini Splits:

The additional Terms of the components listed below are in addition to, and subject to, the General Terms on the reverse side of this page.

1) **Compressors (All Models):** A replacement compressor will be provided for all compressors that fail due to defect for 5 years from date of original installation.

2) **Optional Accessories and Functional Components Parts (All Models):**

A replacement part will be provided for all parts that fail due to defect for one (1) year from date of original installation.

Failure to maintain the equipment through annual maintenance by a qualified service technician shall void the warranty. Proof of service will be required with all warranty claims. Proof of purchase and installation date must be submitted with all claims.