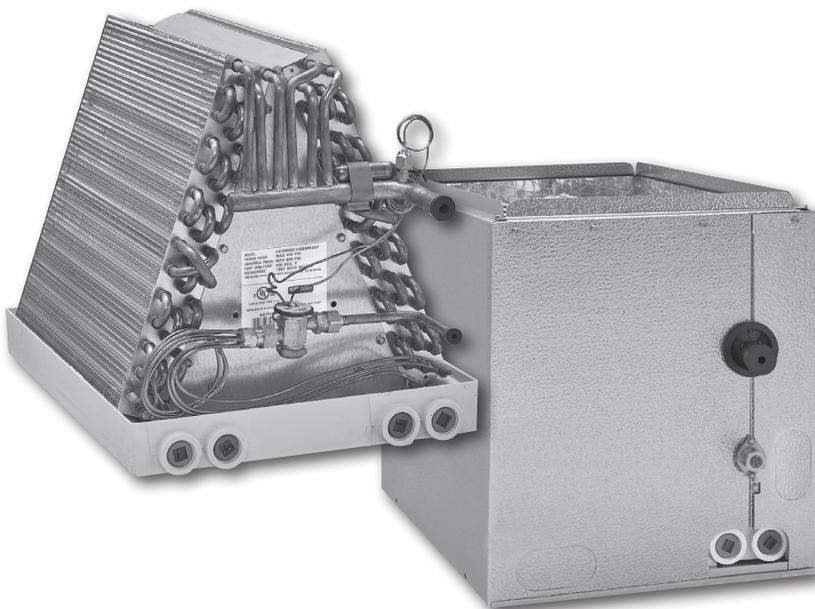


CCG / MCG Coils

Installation Instructions

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GENERAL

Evaporator coils are designed for use with AC condensing units or heat pump units. These instructions are intended as a general guide and do not supersede local codes in any way. Consult with local authorities having jurisdiction before installation. **Read this installation manual and all safety messages prior to installing the evaporator coil.**

Check coil for shipping damage and verify the contents of the box containing the evaporator coil. If you should find damage, immediately contact the last carrier. Verify the efficiency performance requirements, such as SEER, EER, and/or HSPF, are appropriate with the matched condensing or heat pump units. Check outdoor unit manufacturer for proper line sizing. **Coils are shipped with a 10 psi dry air holding charge. Puncture rubber plug on suction line to release charge before removing plugs.** The absence of pressure does not verify a leak. Check the coil for leaks before installing or returning it to your wholesaler.

Position the coil on the outlet of the furnace using sheet metal screws. In horizontal application, the coil should be pitched approximately 1/2" toward the drain connections. **NOTE:** Sloping over 5/8" may cause blow off into the auxiliary drain hole in high static situations. Drain pans are made of a polymer that can withstand temperatures up to 450°F. **Maintain a 3" clearance on oil or drum type heat exchangers and 1½" on sectionalized heat exchangers. Airflow face velocity above 350 ft/min is not recommended for downflow or counterflow applications due to potential water blow-off.** Refer to Specification Guide for limitations.

SAFETY CONSIDERATIONS

Your safety and the safety of others are very important.

We have provided many important safety messages in this manual and on your appliance. Always read and obey all safety messages.



This is the safety alert symbol.

This symbol alerts you to potential hazards that can kill or hurt you and others.

All safety messages will follow the safety alert symbol and signal word. These signals words mean the following:

DANGER: You can be **killed or seriously injured** if you don't immediately follow instructions.

WARNING: Indicate a potentially hazardous situation which, if not avoided, could result in **death or serious injury**.

CAUTION: Indicates a potentially hazardous situation which, if not avoided, may result in **minor or moderate injury**. Caution may also be used to alert against unsafe practices.

NOTICE: Indicates a statement of company policy as the message relates directly or indirectly to the safety of personnel or protection of property.

IMPORTANT: More detailed information concerning the statement of company policy as the message relates directly or indirectly to the safety of personnel or protection of property.

All safety messages will tell you what the potential hazard is, tell you how to reduce the chance of injury, and tell you what can happen if the instructions are not followed.



MCG MULTI-POSITION

Multi-Position A-Coils come factory installed with a vertical and horizontal drain pans and can be configured for upflow, downflow, horizontal blow-through or horizontal pull-through installations. In the center opening of vertical drain pan, a metal Inlet Air Restrictor is factory installed and is required for horizontal applications. It may be removed for vertical applications. **Airflow face velocity above 350 ft/min is not recommended for downflow or counterflow applications due to potential water blow-off.** Refer to Specification Guide for limitations.

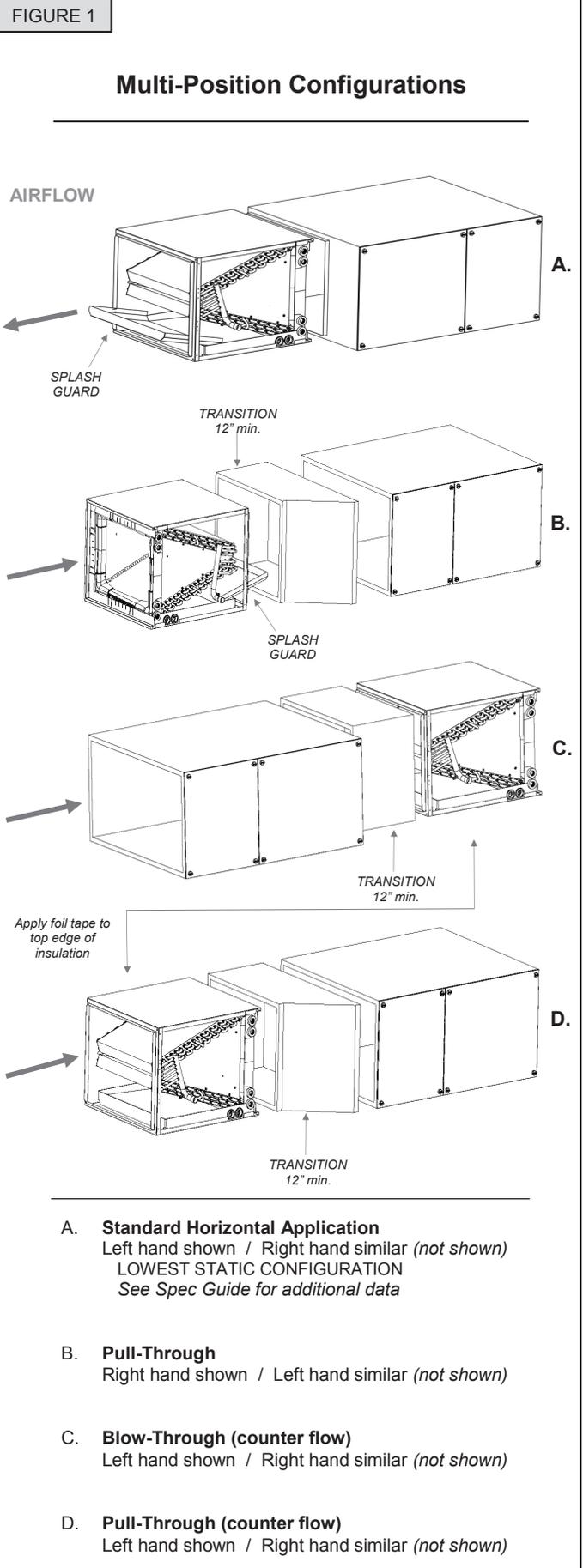
For horizontal configurations, install splash guard (included) onto the coil outlet, and extend suction line insulation into the coil cabinet by 2" to prevent moisture from dripping onto the insulation (the rubber grommet may need to be moved). Splash guard installation is not required for vertical configurations. Bottom flange of guard should rest on pan and sides screwed to the duct flanges. See page 4, Figures 3 and 4 for splash guard instructions.

In downflow and counter flow configurations, aluminum foil tape must be applied to seal the top edge of the insulation to the cabinet. This tape will prevent the possibility of the insulation delaminating and blocking airflow. In horizontal pull-through and counter flow configurations, a minimum 12" transition is required in front of the coil as shown in Figure 1. This is required to ensure proper airflow distribution and to reduce pressure drop.

Coils that are 20" or less in height and are installed in a cabinet with a height of 25-1/2" or greater do not require a transition; all other coil models require this transition. Coil should be level, or pitched slightly toward the drain connection. It is recommended to add silicone caulk between drain pans to prevent water carryover. **Note: Multi-Position A-Coils are also field convertible from left-to-right or right-to-left; see page 5 for instructions on field conversion for horizontal airflow.**

Additional pre-startup checklist for Multi-Position A-Coils:

- Install splash guard (Figure 1 configurations A and B)
- Install 12" transition as shown (non-standard horizontal applications / Figure 1 configurations B and C)
- Factory installed Inlet Air Restrictor should be present in the center opening of the drain pan (horizontal applications)
- Factory installed internal water diverter should be in place (Figure 5, item 5)
- Extend suction line insulation into cabinet (counter flow)
- Tape top edge of insulation (counter flow)



MCG MULTI-POSITION (field conversion) CONDENSATE DRAIN

Field Conversion Instructions from Left-to-Right or Right-to-Left Airflow

Note: This applies only to models available in multi-position; see Specification Guide for details; typical horizontal left-to-right conversion is shown.

FOR EACH STEP, REFER TO FIGURE 5:

1. Remove front panels.
2. Remove the top tie bar and pull the coil assembly from the housing.
3. Remove the horizontal drain pan, and re-install it to the opposite side of the coil (**Note:** horizontal drain pan must have drain plugs tightly closed in the rear of the unit).
4. Remove the top plate.
5. Remove the water diverter, and re-install it to the opposite slab (**Note:** If water diverter is attached by screws, remove screws, and bend tab straight or cut tab off).
6. Replace the top plate, and apply sealant to seal any air gaps.
7. Before re-inserting the coil assembly, cut the front flange on the housing and fold it back to allow access to the horizontal drain connections (**Note:** Copy the factory cut-out on the opposite side of the housing).
8. Slide the coil assembly back into the housing (**Note:** If unit is equipped with a sheet metal spacer, it must be moved to the opposite side of the housing).
9. Re-install the top tie bar.
10. Re-install the piping panel to the housing.
11. Cut a hole in the access panel to allow access to the horizontal drain connections, and re-install the access panel to the housing (**Note:** Access panel may need to be notched to allow access to suction header).
12. Seal unused condensate drain connection cutout holes in the front panel to prevent air leakage.



IMPORTANT

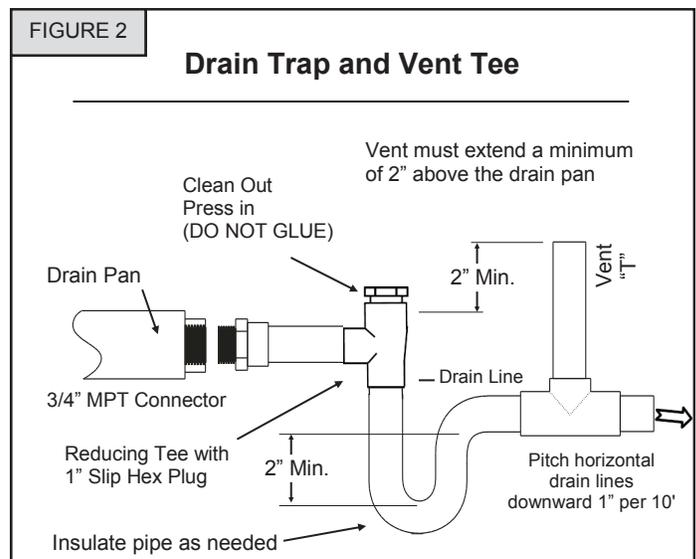


The Clean Air Act of 1990 bans the intentional venting of refrigerant (CFC's and HFC's). Approved methods of reclaiming must be followed. Fines and/or incarceration may be levied for non-compliance.

Coils are equipped with multiple drain connections. Determine the drain connections to be used and note the difference between the primary (green) and secondary (red) openings. Drain plugs are provided for all openings; remove and discard the appropriate plugs with 1/2" drive ratchet and verify that remaining plugs are tight (2.5 ft-lbs). Attach drain line to pan with 3/4" male pipe thread PVC fittings. Hand tight is adequate – **do not over tighten & do not reduce drain line size!**

Route drain(s) line so they will not be exposed to freezing temperatures and do not interfere with accessibility to the coil, air handling system or filter. The drain should be pitched downward 1" per 10' with a 2" trap as close to the coil as possible. If line makes a second trap, or has an extended run before termination, a vent tee should be installed after the trap closest to the pan. See Figure 2.

If the coil is located in or above a living space where damage may result from condensate overflow, a separate 3/4" drain must be provided from the secondary drain connection. Run this drain to a place in compliance with local installation codes where it will be noticed when unit is operational. Condensate flowing from the secondary drain indicates a plugged primary drain. Prime the trap with water. Test line for leaks. Test water flow with unit in operation. An auxiliary drain pan should be installed under the unit, and have a larger footprint than the coil, as specified by most local building codes.

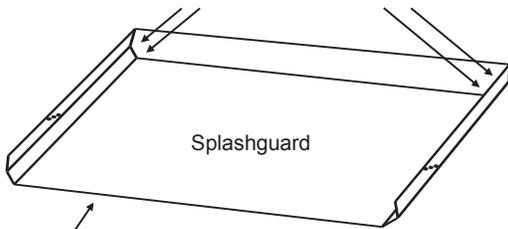


MCG MULTI-POSITION (splash guard)

FIGURE 3

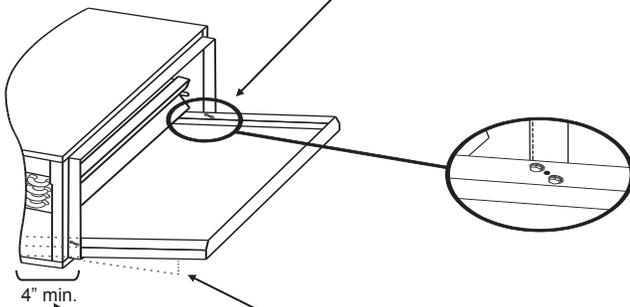
Splashguard without Front Slope

Seal splashguard seams with silicone or other sealant.



Open end of splashguard should rest on the horizontal drain pan.

Fasten splash guard to duct flanges with (4) sheet metal screws. (2) on each side. Screws can be installed from the inside or outside.



4" min.

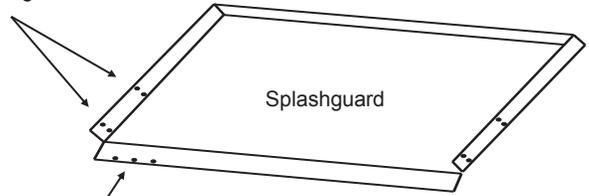
Angle splashguard to ensure proper water drainage back into horizontal drain pan.

Splashguard should overlap the horizontal drain pan by at least 4".

FIGURE 4

Splashguard with Front Slope

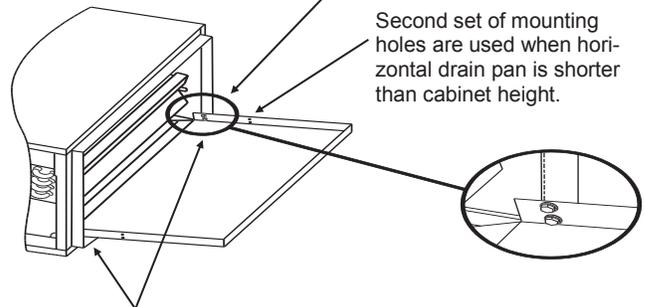
Holes used to mount splashguard to duct flanges.



Caution: These holes are for manufacturing purposes only. **DO NOT** use for installation!

First set of mounting holes are used when horizontal drain pan is flush with housing.

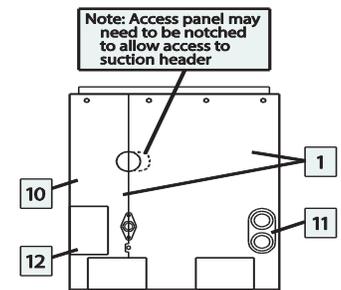
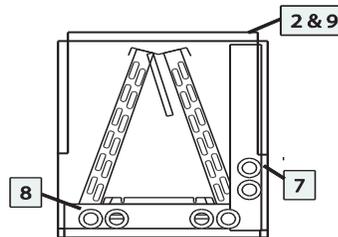
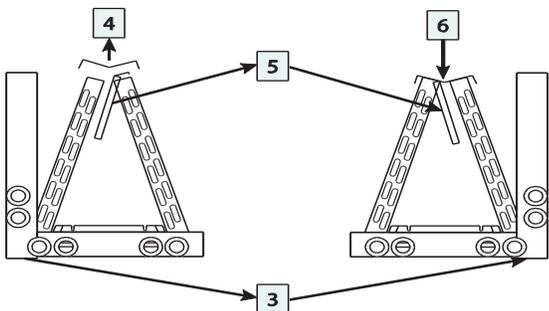
Second set of mounting holes are used when horizontal drain pan is shorter than cabinet height.



Fasten splash guard to duct flanges with (4) sheet metal screws. (2) on each side. Screws can be installed from the inside or outside.

FIGURE 5

Multi-Position Field Conversion



Note: Access panel may need to be notched to allow access to suction header

METERING DEVICE

Coils are suited for R-22 and R-410A refrigerants and can be used with a piston or a TXV. Replacement TXV part numbers are listed below; see kit instructions for change out or installation. It is recommended to place a wet rag around the suction line at the cabinet during brazing to prevent overheating and damaging the sensing bulb.

For optimum performance, reattach and insulate the bulb at a 10 to 2 o'clock position outside of the cabinet to the main suction line no more than one foot from the suction line connection. If necessary, the bulb can be installed on a vertical suction line. In this instance, the bulb must be placed before any trap, with the bulb's capillary tube facing upward. When changing a system from AC to heat pump or heat pump to AC, check the current TXV specifications to determine if a TXV replacement is required. **If the evaporator coil contains a non-bleed TXV and is used with a condensing unit containing a reciprocating compressor, a hard start kit will be required on the condensing unit.**

R-22 TXV Part Numbers	
18—30 MBTUH	H2TXV01
36—48 MBTUH	H2TXV02
60 MBTUH	H2TXV03

R-410A TXV Part Numbers	
18—30 MBTUH	H4TXV01
36—48 MBTUH	H4TXV02
60 MBTUH	H4TXV03

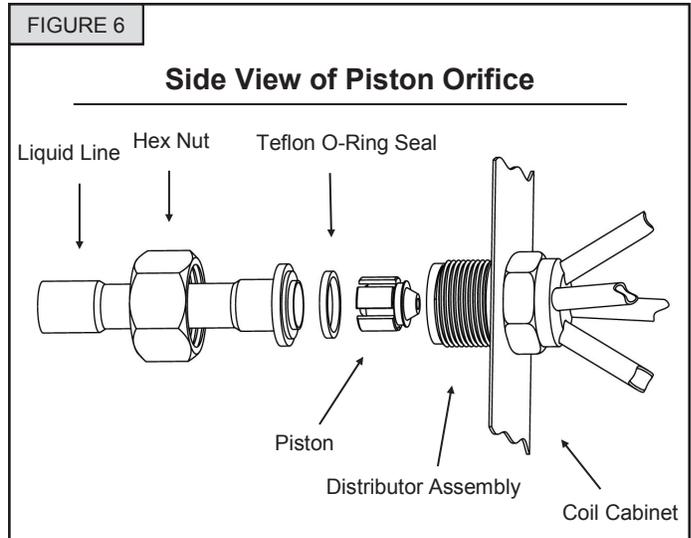
! **IMPORTANT** !

When changing the metering device, ensure the metering device matches the refrigerant type and capacity of the condensing unit. Failure to do so will result in poor performance and possible compressor damage. All coils must be matched properly as listed in the AHRI directory.

Cased coils with a piston metering device are shipped with a cap and hex nut over the threaded fitting. Remove the cap and nut slowly, allowing charge to escape, and secure the liquid line stub (attached to cabinet) to the distributor assembly with hex nut. Discard cap.

For optimum performance, the piston should be sized to match the recommendation from the outdoor unit manufacturer. If the outdoor unit manufacturer does not recommend a piston size, refer to the piston size chart. When changing pistons, refer to Figure 6 and use the following procedure:

1. Loosen hex nut located on liquid line and separate from distributor assembly.
2. Remove the existing piston from inside the distributor assembly.
3. Insert the desired piston into the distributor assembly.
4. Inspect Teflon O-Ring and replace if damaged. Ensure Teflon O-Ring is in place.
5. Re-install hex nut to body and torque to 10 ft-lbs.



COIL CLEANING

The coils should be inspected and preferably cleaned a minimum of once a year or more often, if necessary. Cleaning of the indoor unit's coil should be performed by a licensed professional service technician (or equivalent).

1. Put on personal protective equipment – Safety glasses and/or face shield, waterproof clothing and gloves.
2. Vacuum or brush the coil to remove any matted or surface foreign debris from the fins (dirt, animal hair, etc).
3. Only clean potable water should be used to clean the coils. Clean coil slab surfaces by spraying steady and uniformly at a vertical angle of 30 to 45 degrees with a constant stream of water at moderate pressure (**less than 50 psig**) from top to bottom. A fan nozzle will work best. Do not spray the coil from a horizontal direction.

4. Use of acidic (below 5) or alkaline (above 9) cleaners can strip off factory protective coatings and reduce the life of an aluminum coil.
5. Alkaline (also called no-acid) coil cleaners are products that has a pH greater than 7. Acid coil cleaners are products that have a pH less than 7.

Note: Attempting to back flush from the inside of the coil will require removing parts from the unit, and it may be very difficult to flush the whole coil surface. Attempting to blow water through a coil will slow the water stream and reduce the *flushing action of the outer fin surface*.

REFRIGERANT LINE INSTALLATION

It is recommended to install a filter drier and sight glass in the liquid line. While brazing, purge the system with Nitrogen to prevent contamination. It is recommended to reattach and insulating the TXV sensing bulb at a 10 to 2 o'clock position on the suction line, outside the coil housing, no more than one

foot from the connection. Evacuate the system to 500 microns to ensure proper air and moisture removal (**Note: Deep evacuation or triple evacuation method recommended**). Open the suction service valve slowly and allow the refrigerant to bleed into the system before opening the liquid service valve.

REFRIGERANT CHARGING INSTRUCTIONS ¹

When charging in cooling mode, the outdoor temperature should be 60°F or higher. To allow the pressures to stabilize, operate the system a minimum of 15 minutes between adjustments. When adjusting charge to systems with micro-channel outdoor coils, make small (1 ounce or less) adjustments as these systems are very sensitive to refrigerant charge.

TXV Charging^{2,3,4} – Use the charging method recommended by the outdoor unit instructions. Alternatively, it is recommended to charge to 12°F sub-cooling for AC units and 10°F sub-cooling for heat pump units. In addition, if equipped with an adjustable valve, adjust to 10°F superheat.

Fixed Orifice Charging^{2,3,4} – Use the superheat recommended by the outdoor unit instructions. Alternatively, it is recommended to charge to the superheat table below.

Outdoor Air Temp. (°F)	60	65	70	75	80	85	90	95	100	105	110	115
Superheat (°F)	31	28	25	22	20	16	13	10	8	6	5	5

For heat pump units initially charged in the cooling mode, final adjustments to charge in the heating mode are acceptable if necessary. Some heat pump units require charging in the heating mode. In this case, refer to the outdoor instructions for recommended charging procedures.

If the system is undercharged after the initial charge, add refrigerant until the sight glass is clear and recommended pressures, temperatures, sub-cooling and superheat can be obtained. If the system is overcharged after the initial charge, recover refrigerant until recommended pressures, temperatures, sub-cooling and superheat can be obtained.

Notes:

1. If any problems or questions regarding charge occur, contact customer service.
2. OEM charging methods vary depending on design and application. Verify all recommended pressures, temperatures, sub-cooling and superheat settings result in the proper charge.
3. Coils may require charge compensation due to size variation versus the OEM coil.
4. Temperatures are $\pm 2^\circ\text{F}$ unless otherwise recommended.



LIMITED EXPRESS WARRANTY - HCG/HMG AIR HANDLERS (C,M,V)CG COILS

Congratulations on purchasing your new HVAC equipment. It has been designed for long life and reliable service, and is backed by one of the strongest warranties in the industry. Your unit automatically qualifies for the warranty coverage listed below, provided you keep your proof of purchase (receipt) for the equipment and meet the warranty conditions.

LIMITED SIX (6) YEAR PARTS EXPRESS WARRANTY

All parts are warranted to be free from defects in workmanship and materials for normal residential use and maintenance for six (6) years from the date of purchase by the original consumer for the original residential installation, when the air handler or coil is installed in a non-AHRI matched system. This Limited Express Warranty applies only when the air handler or coil is installed per Comfort-Aire/Century installation instructions and in accordance with all local, state and national codes for normal residential use.

MATCHED SYSTEM LIMITED EXPRESS WARRANTY

When the air handler or coil is installed as part of a residential AHRI-matched system with a Comfort-Aire/Century air conditioning condenser or heat pump, the condenser or heat pump warranty applies to the air handler or coil under normal use and maintenance. Refer to the condenser or heat pump warranty for details, and register the product within 60 days of the purchase for the AHRI-matched system warranty.

EXCEPTIONS

The Limited Express Warranty does not cover normal maintenance —Comfort-Aire/Century recommends that regular inspection/maintenance be performed according to the Installation/Operation/Maintenance Manual. Additionally, labor charges, transportation charges for replacement parts, replacement of refrigerant or filters, any other service calls/repairs are not covered by this Limited Express Warranty. It also does not cover any portion or component of the system that is not supplied by Comfort-Aire/Century, regardless of the cause of failure of such portion or component. Purchasers in Florida, California, Quebec, and any other jurisdiction that prohibits registration requirements to effectuate warranties (1) have no registration requirement and automatically receive the default extended warranty applicable to your equipment, if any, and (2) the failure to register your equipment does not diminish your warranty coverage.

CONDITIONS FOR WARRANTY COVERAGE

- Unit must be operated according to the Comfort-Aire/Century operating instructions included with the unit and cannot have been subjected to accident, neglect or misuse, alteration, improper repair, or an act of God (such as a flood)
- Installation was done by a trained, licensed or otherwise qualified HVAC dealer/contractor
- Performance has not been impaired by use of any product not authorized by Comfort-Aire/Century, or by any adjustments or adaptations to components
- Serial numbers and/or rating plate have not been altered or removed
- Damage has not been a result of inadequate wiring or voltage conditions, use during brown-out conditions, or circuit interruptions
- Air flow around the unit has not been restricted
- Unit remains in the original residential installation
- Any extended warranty is valid to original purchaser only (non-transferable)
- Owner must supply proof of proper maintenance over the life of the unit
- Unit was not purchased over the internet

DURATION OF WARRANTY & REGISTRATION

The warranty begins on the date of purchase by the original consumer. The original consumer must register at www.marsdelivers.com within 60 days of purchase. **The original consumer must retain a receipted bill of sale as proof of warranty period. To receive the AHRI-matched system warranty, also retain proof of the AHRI-matched system installation (part numbers, serial numbers, purchase and installation dates).** Without this proof, the warranty begins on date of shipment from the factory and reverts to the Six-Year Limited Express Parts Warranty.

REMEDY PROVIDED BY THE LIMITED EXPRESS WARRANTY

The sole remedy under the Limited Warranty is replacement of the defective part. If replacement parts are required within the period of this warranty, Comfort-Aire/Century replacement parts shall be used; any warranty on the replacement part(s) shall not affect the applicable original unit warranty. Labor to diagnose and replace the defective part is not covered by this Limited Express Warranty. Access to the unit for service is the owner's responsibility. If for any reason the replacement part/product is no longer available during the warranty period, Comfort-Aire/Century shall have the right to allow a credit in the amount of the current suggested retail price of the part/product instead of providing repair or replacement.

LIMITATION OF LIABILITY

1. **EXCLUSION OF ALL IMPLIED WARRANTIES AND LIMITATION. There are no other express or implied warranties. Comfort-Aire/Century makes no warranty of merchantability.** We do not warrant that the unit is suitable for any particular purpose or can be used in buildings or rooms of any particular size or condition except as specifically provided in this document. There are no other warranties, express or implied, which extend beyond the description in this document.
2. All warranties implied by law are limited in duration to the five-year term of the non-AHRI matched system Pars Warranty. Your exclusive remedy is limited to the replacement of defective parts. **We will not be liable for any consequential or incidental damages caused by any defect in this unit.**
3. This warranty gives you specific legal rights and you may also have other rights which vary from state to state. Some states do not allow limitation on how long an implied warranty lasts or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.
4. No warranties are made for units sold outside the continental United States and Canada. Your distributor or final seller may provide a warranty on units sold outside these areas.
5. Comfort-Aire/Century will not be liable for damages if our performance regarding warranty resolution is delayed by events beyond our control including accident, alteration, abuse, war, government restrictions, strikes, fire, flood, or other acts of God.

COMMERCIAL INSTALLATION LIMITED EXPRESS WARRANTY

When installed in a commercial application, all parts and compressors are warranted to be free from defects in material and workmanship for ONE YEAR from the date of purchase by the original consumer for the original installation.

Please follow the below steps to register your product.

- **Please log onto our website www.marsdelivers.com**
- **Resources**
- **Product Registration**
- **Compete the requested information in all caps Especially the Email Address**
- **Press the "Continue" button at the bottom**
- **A copy of the registration will be sent to the email address that you entered at the top of the page for your records**

KEEP THIS INFORMATION AS A RECORD OF YOUR PURCHASE

Apply Serial Number and Model Number sticker here (from product carton). if unavailable, write serial number and model number below (can be found on unit rating plate).

Date of Purchase _____ Date Installation Completed _____
 Component of new HVAC system Replacement furnace only

Remember to retain your bill of sale as proof of warranty period and ownership.



Due to ongoing product improvements, specifications and dimensions are subject to change and correction without notice or incurring obligations. Determining the application and suitability for use of any product is the responsibility of the installer. Additionally, the installer is responsible for verifying dimensional data on the actual product prior to beginning any installation preparations.

Third party incentive and rebate programs have precise requirements as to product performance and certification. All products meet applicable regulations in effect on date of manufacture; however, certifications are not necessarily granted for the life of a product. Therefore, it is the responsibility of the applicant to determine whether a specific model qualifies for these incentive/rebate programs.

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SP-2M 6/19 CCG-MCG COILS_IOM

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