

USERS INFORMATION MANUAL

Horizontal Air Handler Models:

SEHX - DX Cooling w/ Electric Heat, Uncased

CEHX – DX Cooling w/ Electric Heat, Cased

SCWE – Chilled Water Cooling w/Electric Heat, Uncased-2P

CCWE – Chilled Water Cooling w/ Electric Heat, Cased-4P

SDXW - DX Cooling w/ Hot Water Heat, Uncased

CDXW – DX Cooling w/ Hot Water Heat, Cased

SCWW – Chilled Water Cool w/Hot Water Heat, Uncased-2P

CCWW – Chilled Water Cool w/Hot Water Heat, Cased-4P

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CONTACT INFORMATION

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SECTION I: GENERAL

The following list includes important facts and information regarding the air handler and its inclusions.

1. Air Handler is rated at 240 volts AC at 60 Hertz for electric heat models or 120 volts AC at 60 Hertz for hydronic models.
2. Air Handler is not designed to be operated on a 50 HZ supply.
3. All Air Handler Units are equipped with a blower for A/C or Heat Pump operation.
4. Are designed for horizontal applications only and must not be operated without the control box cover installed.
5. This Air Handler Unit NOTE: This Air Handler unit and its components are listed as a combination AC or Heat Pump system by ETL for sale in the United States and Canada.

USERS MUST READ ALL INSTRUCTIONS IN THIS MANUAL AND THIS MANUAL MUST BE SAVED FOR FUTURE REFERENCE

▲ **WARNING**

FIRE OR ELECTRICAL HAZARD

Failure to follow the safety warnings exactly could result in serious injury, death, or property damage.

A fire or electrical hazard may result causing property damage, personal injury or loss of life.

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance

SECTION II: SAFETY



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

Understand and pay particular attention to the signal words **DANGER**, **WARNING**, or **CAUTION**.

DANGER: indicates an **imminently** hazardous situation, which if not avoided, **will result in death or serious injury**.

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

CAUTION: indicated a **potentially** hazardous situation, which if not avoided, **may result in minor or moderate injury**. It is also used to alert against unsafe practices and hazards involving property damage.

WARNING

Any adjustment, service or maintenance by the home owner and/or user may create a condition where the operation of the product could cause personal injury or property damage.

Only qualified service personnel, a contractor, or an installer may refer to the service and maintenance section of this manual for assistance or for additional information on this appliance.

CAUTION

This product requires periodic routine maintenance and cleaning of the exterior surfaces by the homeowner or user to remove dust and debris. Any additional service must be performed by qualified personnel. This appliance must be serviced and maintained as specified in these instructions and/or to any applicable local, state, and national codes including, but not limited to building, electrical, and mechanical codes.

WARNING

FIRE OR ELECTRICAL HAZARD

Failure to follow the safety warnings exactly could result in serious injury, death, or property damage.
A fire or electrical hazard may result causing property damage, personal injury or loss of life.

1. This Air Handler unit must be kept clear and free of combustible materials, gasoline and other flammable vapors and liquids.
2. Insulating materials may be combustible. The Air Handler unit must be kept free and clear of insulating materials. The air handler area must be examined when installed in an insulated space or when insulation is added to be sure that the insulation material has been kept away from the appliance.
3. Follow the instructions exactly as shown in Startup and Shutdown Section in this manual to properly Startup or Shutdown this appliance.
4. If overheating occurs, turn off the power to the appliance and contact a qualified contractor, installer, or service agency.

DANGER

Do not use this appliance if any part has been under water. A flood damaged furnace is extremely dangerous. Attempts to use the air handler can result in a fire.

A qualified contractor, installer, or service agency must be contacted to inspect the fan coil unit for any water damage and replace all components, control system parts, or electrical parts that have been damaged. If enough damage is present, the air handler may need to be replaced

5. NEVER - Store flammable materials of any kind near your appliance. Gasoline, solvents and other volatile liquids should be stored only in approved containers outside the home. These materials vaporize easily and are extremely dangerous.
6. NEVER – Store cleaning materials such as bleaches, detergents, powder cleaners, etc. near the appliance. These chemicals can cause corrosion of the Air Handler unit sheet metal and the electric heaters, the blower and the electrical controls.
7. NEVER – Use the area around the appliance as a storage area for items which could block or obstruct the normal air flow to the air handler or the space around the appliance. The flow of air is required for safe and proper operation. Never block or obstruct air openings used for ventilation and cooling of the air handler electrical components.
8. Refer to the appliance rating plate for the Air Handler unit model number, for the operating specifications for safe operation.
9. Provide clearances for servicing ensuring service access is allowed for the control box, electric elements and the blower.
10. Failure to carefully read and follow all instructions in this manual can result in malfunction of the Air Handler unit which can cause, death, personal injury, and/or property damage.
11. If the Air Handler unit is installed in a residential garage it must be installed so that the electric heaters are located not less than 18 inches above the floor and the Air Handler unit must be located or protected to avoid physical damage by vehicles.

SAFETY REQUIREMENTS

▲ WARNING

FIRE OR ELECTRICAL HAZARD

Servicing heating/cooling equipment can be hazardous due to electrical components.

Only trained and qualified personnel can service or repair heating/cooling equipment. The home owner **must never** try to perform service, repair or maintenance on this appliance.

Untrained service personnel can perform only basic maintenance functions such as cleaning of exterior surfaces and replacing the air filters.

Observe all precautions in the manuals and on the attached labels when working on this appliance

12. These instructions cover minimum requirements and conform to existing national standards and safety codes. In some instances these instructions exceed certain local codes and ordinances, especially those who have not kept up with changing modular home and residential home construction practices. These instructions are to be followed and are the minimum requirement to perform service or repairs on this appliance.

SECTION III: OWNERS INFORMATION AND SEASONAL INFORMATION

How The Air Handler Unit Works – Heating Cycle

The appliance is equipped with the controls necessary for proper and safe operation.

The air handler is equipped with a relay(s), time delay relay, transformer, Electric Heaters (Electric Heat Models Only), and a blower assembly. The transformer provides 24 VAC to the thermostat.

When the thermostat calls for heat on the electric heat models, 24 VAC is sent through the limit controls to the contactor coil. The contactor energizes sending 240 VAC to the electric heaters causing them to get hot. The indoor fan motor is then energized on the selected heating speed tap after an "ON" time delay and the circulating blower draws cool air from the living space(s), passes it across the heater coils and circulates the warmed air through the duct work to the living space(s). When the thermostat is satisfied the electric heaters are de-energized. The blower is also de-energized after an "OFF" time delay. The heating cycle has ended and the Air Handler unit is ready for the next call for heat to start the next cycle.

When the thermostat calls for heat on the hydronic heating models it sends a 24 signal to the "W" terminal on the control board. If the model has a water pump the control board will energize the pump causing the flow of hot water thru the hot water coil, heating the coil. The indoor fan motor is energized on the heating speed tap after the selected "ON" time delay. The circulating blower then draws cool air from the living space(s), passes it across the hot water coil and circulates the warmed air through the duct work to the living space(s). When the thermostat is satisfied the circulating pump is de-energized. The blower is also de-energized after the selected "OFF" time delay, the heating cycle has ended and the air

handler is ready for the next call for heat to start the next cycle.

How The Air Handler Works – Cooling Cycle

When the thermostat calls for cooling, 24 VAC is sent to the compressor contactor causing it to close energizing the compressor and the outdoor fan motor. The indoor fan motor is then energized on the selected cooling speed tap after the selected "ON" time delay and the circulating blower draws air from the living space(s), passes it across the cooling coil in the air handler and circulates the cooled air through the duct work to the living space(s). When the thermostat is satisfied the compressor contactor is de-energized turning off the compressor and the outdoor fan motor. The blower is also de-energized after an "OFF" time delay and the cooling cycle has ended and the Air Handler unit is ready for the next call for cooling to start the next cycle.

When the thermostat calls for heat pump, 24 VAC is sent to the compressor contactor causing it to close energizing the compressor and the outdoor fan motor. The reversing valve is energized causing the flow of the refrigerant to reverse and heat the coil inside the Air Handler unit. The indoor fan motor is then energized on the selected heat pump speed tap after the selected "ON" time delay and the circulating blower draws air from the living space(s), passes it across the coil in the Air Handler unit and circulates the warmed air through the duct work to the living space(s). When the thermostat is satisfied the compressor contactor is de-energized turning off the compressor and the outdoor fan motor. The blower is also de-energized after an "OFF" time delay and the heat pump cycle has ended and the air handler is ready for the next call for heat pump to start the next cycle.

NOTE: Hydronic Models use a control board where the "Y" signal from the thermostat is connected to the "Y" terminal on the control board and the signal is passed through "CLin" terminal and the "Clout" terminal to the "CC" terminal. If a compressor lockout switch is not used a jumper wire must be placed across the "CLin" terminal and the "Clout" terminal to get a signal on the "CC" terminal. ***You must use the "Y" and "CC" terminals for the blower motor to operate during the cooling cycle.***

Examination of the air handler

The home owner should perform a visual examine the furnace every month for any defects or problems. The items to be inspected are:

1. The physical support of the Air Handler unit is sound without sagging cracks, gaps, etc. around the base so as to provide a seal between the support and the base.
2. The Air Handler casing for any obvious signs of deterioration from rust or corrosion.
3. The return and supply duct connections are physically sound and are sealed to the Air Handler casing.
4. The Air Handler must be serviced by qualified personnel annually, preferably at the start of each heating season.

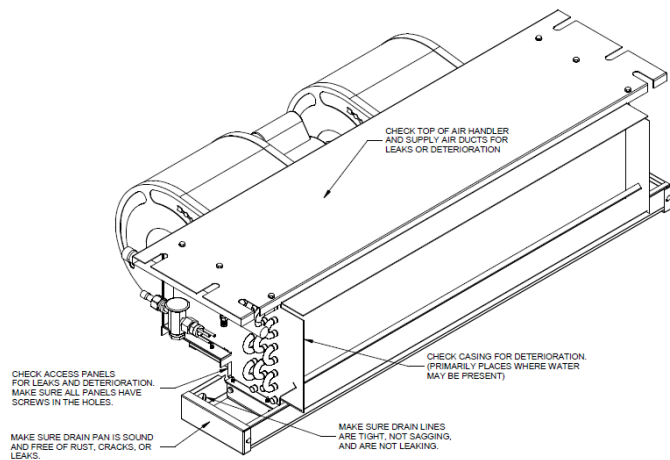


Figure 1: Air Handler Unit Visual Check Points

The Service Technician

The Air Handler's best friend is a qualified service technician. If the appliance gives any indication of improper operation, call the service technician. The service technician is allowed to perform the normal routine care of your appliance. He can detect potential problems and make corrections before trouble develops. Preventative maintenance of this type will allow the Air Handler unit to operate with minimal concerns to the homeowner and will add years of comfort.

Warranty and Responsibilities

It is the sole responsibility of the homeowner to make certain the Air Handler unit has been properly installed and adjusted to operate properly.

The manufacturer warrants the appliance to be free from defects in material or workmanship for a stated time in the warranty agreement. The manufacturer will not be responsible for any repair costs to correct problems due to improper setup, improper installation, improper Air Handler adjustments, installing parts or components on the appliance that are not listed for use with this appliance, improper operating procedures by the user or repairs performed by the appliance user or owner.

Some specific examples of service calls which will be excluded from warranty reimbursement are:

1. Correcting faulty duct work in the home. This can be due to not enough ducts or ducts are too small to provide proper air flow through the Air Handler unit.
2. Correcting electrical wiring problems in the supply wiring to the Air Handler unit.
3. Resetting circuit breakers or on/off switches used for servicing.
4. Problems caused by installation and operation of any air conditioning unit, heat pump, or other air quality devise which is not approved for use with this Air Handler unit.
5. Adjusting or calibrating the thermostat.
6. Problems caused by construction debris which has fallen into the Air Handler unit.
7. Replacement of fuses.
8. Problems caused by dirty air filters.
9. Problems caused by restrictions in the return or supply air flow causing low air flow.

The home owner should establish a firm understanding of these responsibilities with the installer or Service Company so

there will be no misunderstanding of what will be covered under warranty at a later date.

While you are away

The Air Handler unit is equipped with safety shutoff devices which are designed to prevent the appliance from overheating in case of a malfunction. For this reason it is never practical to assume the appliance will operate unattended for a long period of time. An example of a malfunction that can cause significant damage to the home would be:

If the blower motor fails the heaters will cycle on the safety shutoff devices while the temperature inside your home continues to drop. All of the water pipes will freeze once the temperature falls below 32°F.

If you are planning to be away from home for a long period of time, have someone check on your home everyday, especially when the outside temperatures will be below 35°F to ensure the Air Handler is operating properly. This may prevent water pipes from freezing.

The Air Handler Unit Fails to Operate Properly

If any abnormalities are observed while the Air Handler unit is operating normally, perform the following checks:

1. Check the setting on the thermostat to make sure the thermostat is set above the room temperature.
2. Check to see if the electrical power is turned on at the circuit breakers at the main service circuit breaker box or check any on/off switches that may be used for service disconnect switches.
3. Check any inline fuses that may have been installed on the Air Handler unit to determine if it has blown.
4. Make sure the air filters are clean, return grilles clean, are not obstructed, and supply air registers are open.

If the cause of the malfunction is not obvious do not attempt to service the appliance yourself. Call a qualified service agency/company to repair the appliance.

▲ WARNING
<p style="text-align: center;">FAN COIL UNITS WITH ELECTRIC HEATERS</p> <p>Should overheating occur turn the circuit breakers on the main electrical service entrance (Circuit Breaker Box) to the off position. Call qualified service personnel to troubleshoot and repair the appliance. DO NOT allow the fan coil unit to continue to cycle on the limit switches.</p>

When to Call For Service Assistance

Very often time can be saved if you give a service agency the information about the Air Handler unit ahead of time. This will enable the service agency to determine the specific components used and possibly indentify the problem, thus arriving with the parts to fix the problem. Write down the model number, Serial Number and be prepared to describe what the Air Handler unit is or is not doing and what you have checked prior to calling.

SERVICE AGENCY INFORMATION

Fill in Below

MODEL NUMBER:

SERIAL NUMBER:

SERVICE COMPANY: _____
 ADDRESS: _____
 TELEPHONE (DAYTIME): _____
 TELEPHONE (EMERGENCY) _____
 NOTES: _____

SECTION IV: STARTUP AND SHUTDOWN INSTRUCTIONS

Read the instructions below before trying to start the appliance.

WARNING

If you do not follow these instructions exactly, a fire may result causing property damage, personal injury, and/or loss of life.

- A. **BEFORE OPERATING**; check around perimeter of the Air Handler unit to make sure there are no flammable materials in the area. If you smell vapors of any kind, **DO NOT** turn on the power to the appliance until vapors have been ventilated and removed from the area of the appliance.
- B. **CHECK THE FURNACE**; visually check the appliance for loose screws and/or panels that may be missing or have fallen off.
- C. **CHECK DUCT CONNECTIONS**; visually check the connections of the ducts to the appliance to make sure there are no gaps or holes and ducts are securely fastened to the Air Handler unit.

Turn On / Start the Appliance

- 1. **STOP!** Read the safety information above before proceeding.
- 2. Set the thermostat to the lowest setting.
- 3. Turn off all electrical power to the appliance at the main service disconnect box.
- 4. Open the ceiling access panel.
- 5. Turn off the circuit breakers to the appliance.
- 6. Remove the control box cover.
- 7. Visually check the control box for loose wire connections and faulty or loose components.
- 8. Visually check the blower compartment for obstructions or loose debris.
- 9. Replace the control box cover.
- 10. Close the ceiling access panel.
- 11. Turn the circuit breakers in the main service disconnect box to the on position.
- 12. Set the thermostat to the desired setting.

Shutting Down or Turning Off the Appliance

- 1. Set the thermostat to the lowest setting.
- 2. Turn off all electrical power to the appliance at the main service disconnect box.

- 3. Open the ceiling access panel.
- 4. Turn off the service disconnect on the appliance, if used.
- 5. Close the ceiling access panel.

SECTION V: OWNER MAINTENANCE

All appliances need annual maintenance in order to operate properly. The annual service must be preformed by qualified service personnel. The homeowner is expected to perform general cleaning of the exterior surfaces and replacement of the air filters. Air filters must be checked every month and replaced as needed. Figures 2 and 3 indicate the location of the air filters.

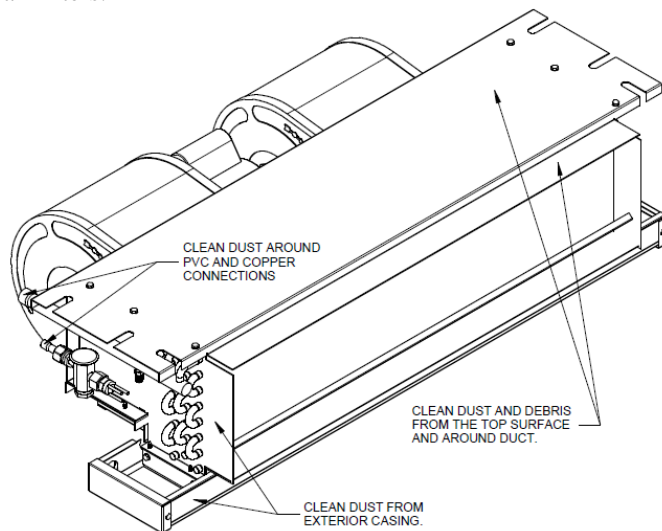


Figure 2: Home Owner / Users Cleaning Points

Louvered Ceiling Access Panel Air Filter Replacement

Air Handler units that are installed in a horizontal position generally have the filters in louvered ceiling access panels located in the ceiling. The louvered ceiling access panel has an air filter rack designed to retain a 1” thick standard air filter. Follow these easy steps to replace the air filters.

- 1. Follow the procedure **“To Turn Off the Appliance”** in the Startup and Shutdown Instructions section of these instructions.
- 2. Remove the white handled thumb screw on the front of the louvered ceiling access panel. Be careful when you remove the last thumb screw as the panel can swing down rather quickly and strike you in the head.
- 3. Let the grille door fall towards you, then, just let it hang.
- 4. Remove the air filter. The air filter is a disposable filter **DO NOT** attempt to clean the filter and reuse it. **REPLACE IT EACH TIME YOU CHANGE THE AIR FILTER.**
- 5. The air filter will be 24” x 20” x 1”. Make sure it is replaced with a standard air filter that is 24” x 20” x 1”.
- 6. Clean any dust or debris from both sides for the louvers and around the area where the filter is placed before the new air filter are installed.
- 7. Place the new air filter back into the louvered ceiling access panel air filter rack, push the louvered ceiling access panel closed and tighten the thumb screw until the panel is securely fastened to the louvered ceiling access panel frame assembly.

1. Follow the **“Turn On / Start the Appliance”** in the Startup and Shutdown Instructions section of these instructions.

NOTE: Make sure the flow arrows on the air filter are pointing away from the louvers in the louvered ceiling access panel.

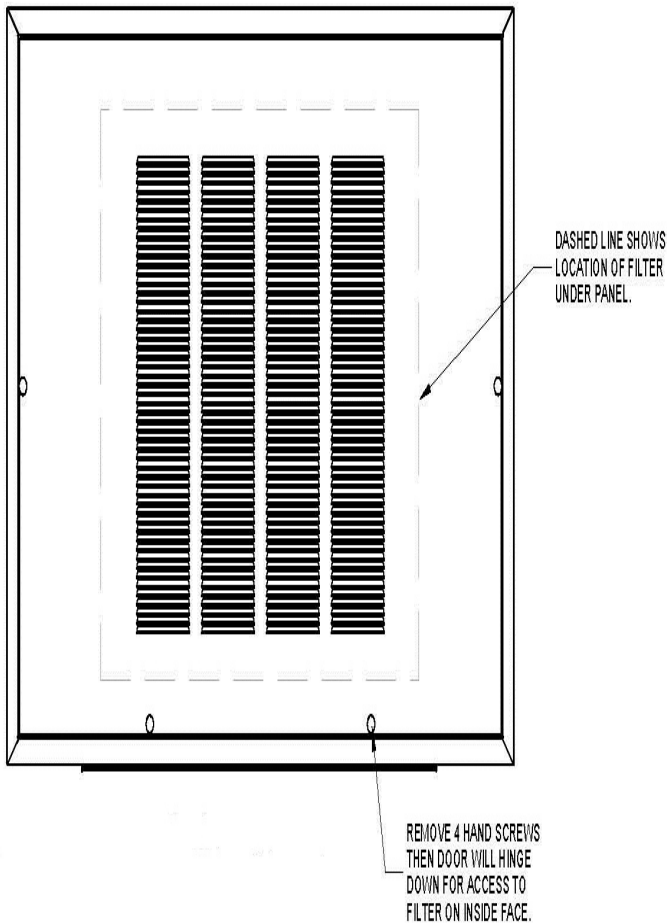


Figure 3: Ceiling Access Panel - Air Filter Location

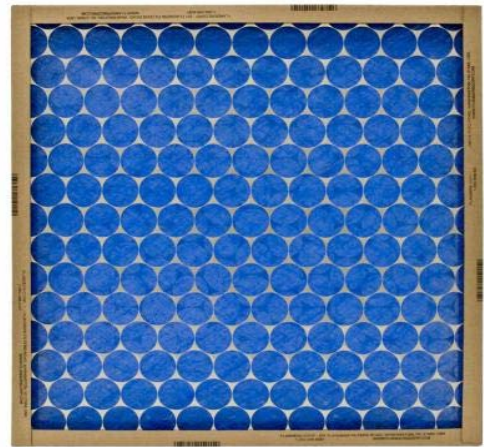


Figure 4: Replacement Standard 1” Air Filter

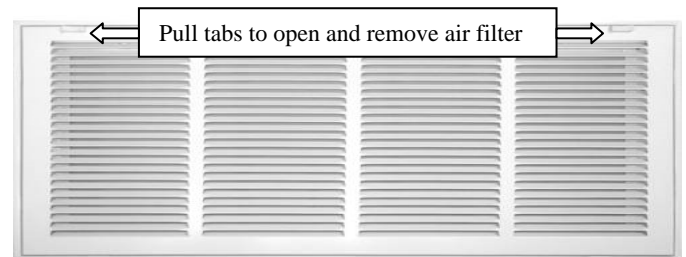


Figure 5: Optional Return Air Filter Grille

Air Filter Replacement – Optional Filter Grille

Follow these easy steps to replace the air filters.

2. Follow the procedure **“To Turn Off the Appliance”** in the Startup and Shutdown Instructions section of these instructions.
3. Remove the white handled thumb screws on the front of the accessory filter grille located at the return air end of the appliance.
4. Let the top of the door fall towards you then push down towards the floor.
5. Remove the air filter. The air filter is a disposable filter. DO NOT attempt to clean the filter and reuse it.
6. Check the size of the air filter that was removed to make sure it is replaced with a filter that is the same size.
7. Clean any access dirt or debris around the front area where the air filter is located. Be careful not to use any small vacuum cleaner parts or any small brushes to clean inside the filter box, around the filter track. These parts or brushes can fall off or drop into the return duct causing a restriction of the return air flow.
8. Slide the air filter into the filter rack, push the door closed and tighten the thumb screw.
9. Follow the **“Turn On / Start the Appliance”** in the Startup and Shutdown Instructions section of these instructions.

NOTE: Make sure the flow arrows on the air filter are pointing away from the louvers in the return air filter grille.

NOTE: Accessory filter grille can be used on the return air end of the Air Handler unit when the louvered ceiling access panel is not desired because of noise.

▲ WARNING

IMPACT HAZARD

Use extreme caution when removing the Ceiling Access Panel screws. The panel is secured to the frame assembly with the thumb screws. Once the thumb screws have been removed the Ceiling Access Panel will swing down very quickly. Anyone that standing under the Ceiling Access Panel will get hit with the panel unless the panel is supported by holding it with their hands.

The louvers can also have sharp edges which can cut hands or fingers. The use of gloves is recommended when servicing the horizontal fan coil unit.

SERVICE AND MAINTENANCE MANUAL

SECTION I: SAFETY

THE HOME OWNERS AND / OR APPLIANCE USERS MUST STOP HERE! DO NOT PROCEED ANY FURTHER!

This section has been designed to assist a **qualified service agency** in performing service and maintenance on this appliance.

The homeowners and/or the appliance user must never attempt to perform any service or maintenance on the appliance especially when it involves the removal or adjustment of any parts and/or components.

▲ WARNING

The manufacturer or distributor will not be responsible for any repairs due to removal of parts or improper parts changes, improper maintenance, improper adjustments or improper modifications to this fan coil unit that were performed by the homeowner and/or the appliance user.

The manufacturer will not be responsible if the homeowner and/or appliance user use this section of the instructions in an attempt to perform maintenance or repairs to the fan coil unit. This practice is very dangerous and may result in a fire causing property damage, personal injury, loss of life and/or will void the appliance warranty.

The following safety rules must be followed when servicing this furnace.



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

Understand and pay particular attention to the signal words **DANGER, WARNING, or CAUTION.**

DANGER: indicates an **imminently hazardous** situation, which if not avoided, **will result in death or serious injury.**

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

CAUTION: indicated a **potentially hazardous** situation, which if not avoided, **may result in minor or moderate injury.** It is also used to alert against unsafe practices and hazards involving property damage.

▲ WARNING

Improper adjustment, service or maintenance may create a condition where the operation of the product could cause personal injury or property damage.

Refer to this manual for assistance or for additional information consult the Technical Support Group.

▲ CAUTION

This product must be serviced and maintained as specified in these instructions and/or to any applicable local, state, and national codes including, but not limited to building, electrical, and mechanical codes.

▲ WARNING

FIRE OR ELECTRICAL HAZARD

Failure to follow the safety warnings exactly could result in serious injury, property damage, or death.
A fire or electrical hazard may result causing property damage, personal injury or loss of life.

SAFETY REQUIREMENTS

1. The Air Handler units with electric heaters have a two (2) pole terminal block to connect the electrical supply circuit. Make sure you check each electrical circuit with a meter to be sure the power has been disconnected.
2. Insulating materials may be combustible. The Air Handler unit must be kept free and clear of insulating materials.
3. Follow the instructions exactly as shown in Startup and Shutdown Section in this manual to properly Startup or Shutdown this appliance.
4. Make sure all moving parts have come to a complete stop before attempting to perform any work the appliance. Moving parts can cause serious injury if clothing or body parts get caught in the moving part.

▲ WARNING

ELECTRICAL SHOCK, FIRE HAZARD

Failure to follow the safety warnings exactly or improper servicing could result in dangerous operation, serious injury, property damage, and/or death.

- Before servicing, disconnect all electrical power to the appliance. Make sure you disconnect service disconnects. Make sure you check for any accessories that may be power by a separate power supply and be sure to disconnect that power supply.
- When servicing controls, label all wires prior to disconnecting to aid in proper reconnection of wires.
- Verify proper operation after servicing by turning the thermostat above the room temperature for a brief period of time to ensure proper appliance operation

WARNING

FIRE HAZARD

NEVER PLACE A JUMPER BETWEEN "R" & "W"

Placing jumper wire between the RED and WHITE thermostat wires at the fan coil unit in order to override the thermostat and energize the heater elements is an extremely dangerous practice that can result in damage to the thermostat, dangerous operation, serious injury, property damage and/or death.

SECTION II: AIR HANDLER UNIT MAINTENANCE

The interior sections of the Air Handler unit must be cleaned and adjusted by a qualified service contractor once a year or before the start of each heating or cooling season. The following items must be checked:

1. The blower wheel and motor for excessive dirt.
2. The electric heaters for wear, damage or corrosion.
3. The electrical components for excessive dust, dirt, wear, or deterioration.
4. The supply air duct system for excessive dust, dirt or debris
5. The return air duct system for excessive dust, dirt or debris
6. All electrical wiring for wear, insulation cracks and/or damage.
7. Check the air conditioning evaporator coil for dust, debris or damage.
8. Check the evaporator coil drain pan for proper drainage to prevent water backup into the unit.
9. The Air Handler casing and all interior sheet metal panels or dividers.

Air Handler Unit Cleaning Procedure

1. Follow the instructions exactly as shown in Startup and Shutdown Section in this manual to properly shutdown this appliance.
2. Open the ceiling access panel by removing the thumb screws.
3. Remove the four (4) screws that secure the motor guard to the control box.
4. Remove the control box cover by removing the four (4) screws that are securing the cover to the Air Handler unit.
5. Disconnect the blower motor power wires from the relay and the terminal block.
6. Remove the strain relief that is securing the wires to the control box and remove the blower motor wires from the control box.
7. Remove the two screws on the blower mount plate located on the right side, the left side, the screw on the top center and the screw in the control box. Refer to Figure 9 for screw locations.
8. Grab the blowers and lift the panel up and pull out on the bottom. Slide the panel down and out of the Air Handler chassis.

9. Use a vacuum cleaner and a small brush to remove any dirt and debris from the blower and evaporator coil compartments.
10. Check the evaporator condensate drain pan for any debris and ensure the pan is properly draining by pouring water into the drain to check it.
11. Remove any excess water that may have spilled from checking the evaporator condensate drain.
12. Pour ½ cup of Clorox in the drain pipe to kill any fungus that may be growing inside the pipe. This will help keep the condensate drain from plugging.
13. Check in the area in front of the blower where the heater elements are located and remove any dust, dirt or debris from around the heater elements. Be careful not to damage the heater elements with the vacuum hose or the brush.

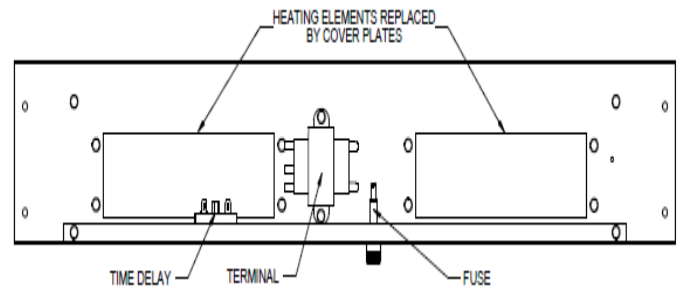


Figure 6: No Electric Heat Control Box

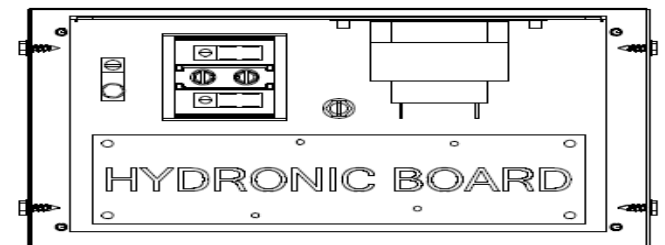


Figure 7: Hydronic Heat Control Box – No Pump

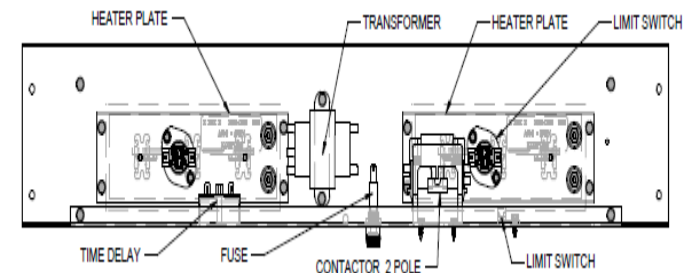


Figure 8: Electric Heat Control Box

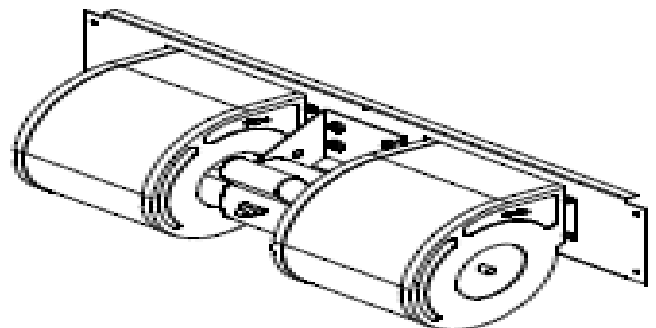


Figure 9: Blower Assembly and Mounting Screw Location

14. Check both blower wheels for dust and debris. Use the brush and the vacuum cleaner to remove any dust or debris from the wheels. Be careful not to move or accidentally remove the blower wheel balance weight located on the wheel blade. If it is moved or removed it will cause the blower wheel to vibrate. If the wheel is vibrating, you must replace it.
15. Check the blower motor for dust and debris. Be sure to clean the openings on the motor housing as these openings are used to cool the motor. If the dust, dirt or debris has not been removed from these openings it will cause the motor to run hotter than normal and will shorten the life of the motor.
16. Check and clean with the brush and vacuum cleaner any dust in the supply and return ducts or passages as far as you can reach. If these ducts look like they have an excessive amount of dust, dirt or debris you should recommend to the home owner or user to call a professional to properly clean the duct system as dust is very flammable and can easily catch fire.
17. Check and clean any dust, dirt, or debris from all of the controls and all of the surfaces in the control box. If dust or dirt is left on the components they will operate at a much hotter temperature causing premature component failure.
18. Check the evaporator coil for dust or dirt. If the evaporator coil is dirty you must use a foam spray to clean the coil. Before cleaning you must remove the electric heaters on electric heat models only. Follow the procedure for removing the electric heaters in this manual. Once the electric heaters have been removed or if you do not have electric heat; spray the entire surface of the coil. You do not need to rinse the coil as that will happen when you run the air conditioner.
19. On electric heat models only replace the heaters as described in the procedure for removing the electric heaters in this manual.
20. Grab the blowers and lift the panel up, push in on the bottom, then pull down to set the blower mount plate in place.
21. Replace the two screws on the blower mount plate located on the right side, the left side, the screw on the top center and the screw in the control box. Refer to Figure 9 for screw locations.
22. Place the motor wires into the control box and replace the strain relief that is securing the wires to the control box.
23. Reconnect the blower motor power wires from the relay and the terminal block.
24. Replace the control box cover and secure with the screws that were removed.
25. Close the ceiling access panel and secure the panel with the thumb screws that were removed.
26. Follow the instructions exactly as shown in Startup and Shutdown Section in this manual to properly startup this appliance.
2. Open the ceiling access panel by removing the thumb screws.
3. Remove the control box cover by removing the four (4) screws that are securing the cover to the Air Handler unit.
4. Disconnect the blower motor power wires from the relay and the terminal block.
5. Remove the strain relief that is securing the wires to the control box and remove the blower motor wires from the control box.
6. Remove the strain relief that is securing the supply power wires and remove the wires from the control box.
7. Remove the five (5) screws that secure the control box to the Air Handler unit and remove the control box. The electric heater elements are attached to the control box and will be removed with it so be careful not to damage the heaters while you are removing the control box.
8. Remove the wires from the heater screw terminals.
9. Remove the two (2) screws that secure the limit control to the electric heater mount plate and remove the limit control.
10. If you are removing the right side electric heater you must remove the two relays that are in front of the electric heater.
11. Remove the four (4) screws that are securing the electric heaters to the control box and remove the heater.
12. Reinstall the new electric heater and secure it to the control box with the screws that were removed.
13. Reinstall the limit control in the hole provided in the heater mount plate and secure it with the screws that were removed.
14. Reconnect the wires and the relays that were removed in Steps 8 and 10.
15. Reinstall the control box and secure it the Air Handler unit with the screws that were removed in Step 7.
16. Reinstall the wires that were removed in Steps 4, 5 and 6.
17. Reinstall the control box cover and secure to the control box with the screws that were removed in Step 3.
18. Close the ceiling access panel and secure to the frame assembly with the thumb screws that were removed in Step 2.
19. Follow the instructions exactly as shown in Startup and Shutdown Section in this manual to properly startup this appliance.

SECTION III: AIR HANDLER UNIT CONTROLS

Electric Heat Models

This section discusses the Air Handler unit controls and how they operate. Refer to Figures 10 or 11 for component locations.

1. **The Limit Controls** – Each electric heater element has a limit control directly in front of it to sense overheating of the element and open if the temperature gets above the set point of the limit control.
2. **The Heater Contactors** – The electric heater relays simply turn the heater elements on and off. The relays are controlled by the thermostat. On a call for heat 24 VAC is sent to the relay(s) 24 VAC coil energizing the relay. When the call for heat has been satisfied the 24 VAC is

Removing Electric Heaters

1. Follow the instructions exactly as shown in Startup and Shutdown Section in this manual to properly shutdown this appliance.

removed from the relays 24 VAC coil de-energizing the relay(s).

3. **Cooling Time Delay Relay (TDR)** – The cooling time delay relay is used as the blower motor “ON” delay. When the thermostat calls for cooling or the fan switch on the thermostat is moved from the “AUTO” to the “ON” position, 24 VAC is placed on the “G” terminal from the thermostat to the 24 VAC coil on the time delay relay. The relay controls the blower on time delay and is adjustable from 4 - 30 seconds. There is no off delay.
4. **Circuit breakers** – The circuit breakers are the over-current protection for the Air Handler unit. Field wiring must be protected by field supplied circuit breakers or fuses sized to protect the wire connected to the Air Handler unit.
5. **Transformer** – The transformer is used to step down voltage from 240 VAC to 24 VAC. The transformer provides the required 24 VAC for the system control circuit.
6. **Blower Motor Isolation Relay** - This relay is used for isolation between the high and low speeds of a motor. The wiring has been designed so that the normally closed contacts are used for heating and the normally open contacts are used for cooling. The relay coil is energized after the thermostat has a call from the “G” terminal starting the time delay cycle on the time delay relay. Once the time delay relay has reached the delay setting the relay contacts close energizing the isolation relay coil. The normally closed contacts on the isolation relay open and the normally open contacts close, energizing the motor on the selected cooling speed.

Hydronic Heat Models

This section discusses the Air Handler unit controls and how they operate. Refer to Figures 10 or 11 for component locations.

1. **Transformer** – The transformer is used to step down voltage from 240 VAC to 24 VAC. The transformer provides the required 24 VAC for the system control circuit.
2. **Control Board** – The hydronic models use a hydronic control board to operate and control all of the components on the Air Handler unit. The water pump is connected directly to the “PUMP” terminals on the board. The “W” signal from the thermostat controls the operation of the pump. When there is a 24 VAC signal from the thermostat to the “W” terminal on the hydronic control board the pump will energize and start the flow of water to the heating coil. When the call for heat has been satisfied and the “W” signal is removed from the hydronic control board the pump will de-energize and the flow of water to the coil will stop.
The Air Handler unit is now in standby mode waiting on the next call for heat.
3. **Blower Motor Operation** – The hydronic control board has three (3) speed terminals for the blower motor. The hydronic control board will send 120 VAC to the “HI” terminal for cooling operation, or send 120 VAC to the “MED” terminal for de-humidification when the Air Handler unit is in the cooling operation, or send 120 VAC

to the “LOW” terminal for low speed blower operation in the heating operation. The hydronic has two jumper pins for selectable blower motor “ON” and “OFF” time delays. The user can select either a 0 second delay, or a 15 second delay, or a 30 second delay on the blower motor start. This allows the blower to delay on start for the selected time. The user can select either a 0 second delay, or a 15 second delay, or a 30 second delay on the blower motor stop cycle. This allows the blower motor to continue to operate for the selected time.

SECTION IV: SEQUENCE OF OPERATION

Continuous Blower – Electric Heat Models

The thermostat has a manual fan switch that can be moved to the “On” position or it can be programmed for **continuous** fan operation. This setting causes the thermostat to complete the circuit between “R” and “G” terminals causing the time delay relay to start the time delay cycle. Once the time delay relay has completed the on-delay cycle the contacts will close sending voltage to the isolation relay coil. The isolation relay will close the normally open contacts (Terminals #2 and #4) sending voltage to selected indoor blower motor speed tap connected to terminal #4. The normally closed contacts (Terminals #5 and #6) will open.

The indoor blower will operate continuously until the fan switch on the thermostat has been switched from “ON” to “AUTO”.

Continuous Blower – Hydronic Heat Models

The thermostat has a manual fan switch that can be moved to the “On” position or it can be programmed for **continuous** fan operation. This setting causes the thermostat to complete the circuit between “R” and “G” terminals sending 24 VAC to the “G” terminal on the control board. Once the selected control board time has completed the control board will send 120 VAC to the “HIGH” terminal on the control board to selected indoor blower motor speed tap.

The indoor blower will operate continuously until the fan switch on the thermostat has been switched from on to auto.

The compressor contactor will open turning off the compressor and the outdoor fan motor. The air handler is now in the standby mode waiting for the next cooling cycle

Intermittent Blower – The Heating Cycle

Electric Heat Models

When the thermostat is in the HEAT mode and the fan switch on the thermostat is set to AUTO. The call for heat closes the thermostat circuit between the “R” and “W” terminals. 24 VAC is sent from the “W” terminal on the thermostat, through the white thermostat wire, to the white pigtail wire on the Air Handler unit, to the 24 VAC coil on the heater contactor. This signal energizes the heater contactor, closing the contacts and sending 240 VAC to the heaters. The blower motor low speed wire is also connected to the T1 terminal on the heater contactor so the blower is energized at the same time as the heater. The blower will continue to operate until the thermostat is satisfied. When the call for heat has been satisfied, the signal will be removed from the “W” terminal and the “W” terminal is de-energized and the heater contactor opens turning off the heater and the blower motor. The constant torque blower motor is connected to the normally closed contacts of the isolation relay. The 24 VAC signal from the “W” terminal on the thermostat will energize the motor at the same time as the heater relay and will de-energize the motor at the same time as the heater relay.

The Air Handler unit is now in standby mode waiting for the next heating cycle.

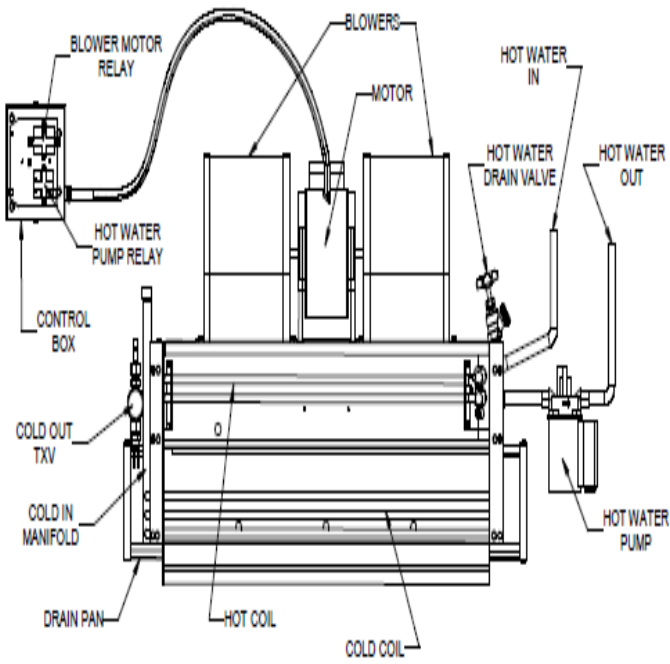


Figure 10: Component Locations – Hydronic Heat Models

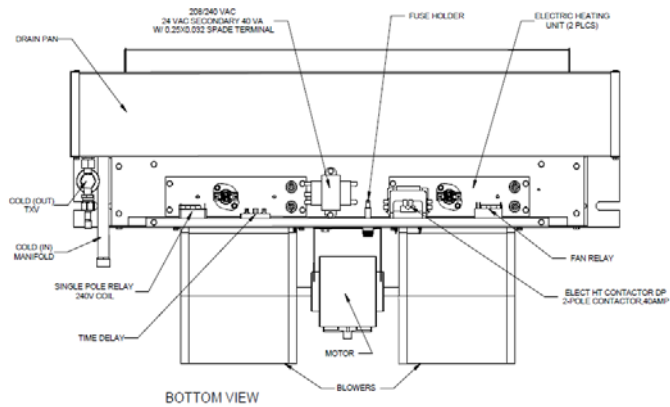


Figure 11: Component Locations – Electric Heat Models

Intermittent Blower – The Cooling Cycle

Electric Heat Models

The thermostat has a manual fan switch that can be moved to the “Auto” position or it can be programmed for auto fan operation. When the thermostat calls for cooling, a circuit is completed between the “R”, “Y” and “G” Terminals. The indoor fan motor is energized from the “G” terminal on the thermostat causing the time delay relay to start the on-time delay. The time delay relay contacts will close the circuit to the isolation relay coil after the on- delay is complete. The isolation relay normally open contacts (Terminals #2 and #4) will close and the motor will operate on the selected speed tap that has been placed on terminal #4.

The thermostat also sends 24 VAC to the “Y” thermostat wire energizing the compressor contactor and the outdoor fan motor.

When the thermostat is satisfied the circuit between “R”, “Y” and “G” will open. The time delay relay will open the circuit to the isolation relay and the blower motor will turn off. The constant torque blower motor will have a 13 second off-delay.

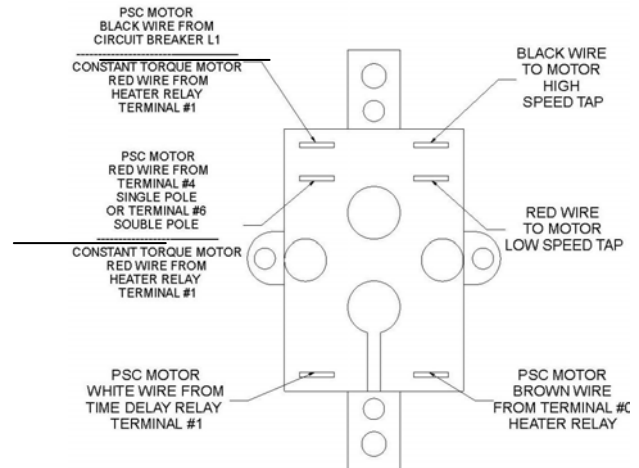


Figure 12: Blower Motor Speed Tap Isolation Relay – Constant Torque and PSC Motors

WARNING

For personal safety be sure to turn the electrical power “OFF” at the main entrance (Circuit Breaker Box) and at the control box circuit breakers before attempting any service or maintenance operations. Home owners should never attempt to perform any maintenance which requires opening the air handler control box door.

SECTION V: TROUBLE SHOOTING

The following checks should be made before trouble shooting the Air Handler unit controls for a no heat issue. The electric

heat models use relays for the blower motor and a contactor for the electric heat. The hydronic heat models use a hydronic control board that controls the operation of all the components.

1. Check all of the circuit breakers. Make sure they are turned to the “ON” position and have not tripped.
2. Check all fuses, especially any supply line fuses that were installed during installation. If the fuse is blown, check the wiring with an OHM meter for a short to ground. If shorted, repair the short, and then replace the fuse.
3. Check any electrical switches that are external to the Air Handler unit to make sure they are turned on.
4. Check all wiring connections, especially on any of the components, to ensure they are securely fastened.

Electric Heat Models

If you have electric heaters and there is 240 volts to the control box contactor on the L1 and L2 terminals and you have 24 volts between to the “R” wire and ground.

Constant Torque Motor – Electric Heat Models

If the motor is not running, check for 240 volts at the T1 and T2 terminals and 24 volts at the motor terminals on the isolation relay. If the 240 volts and 24 volts is present at the motor terminals but the motor is not operating, then replace the motor. Refer to Figure 14 and Table 1 for terminal locations and definitions.

If 240 volts is not present on the L1 and L2 terminals of the contactor check the connections to the circuit breaker for an open breaker.

If 240 volts is present at the L1 and L2 but not on the T1 and T2 terminals check the limit switches which are in the 24 VAC circuit to the contactor.

Constant Torque Motor – Hydronic Heat Models

If the motor is not running, check for 120 volts and 24 volts at the motor terminals on the hydronic control board. If the 120 volts and 24 volts is present at the motor terminals on the control board but the motor is not operating, then replace the motor. Refer to Figure 14 and Table 1 for terminal locations and definitions.

If 120 volts is not present check the connections to the circuit breaker for an open breaker.

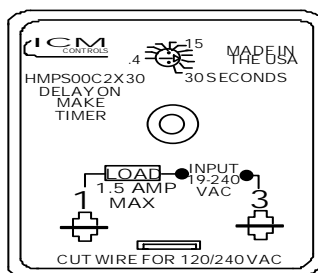


Figure 13: Adjustable Time Delay Relay (TDR) Terminals for Electric Heat Models Only.

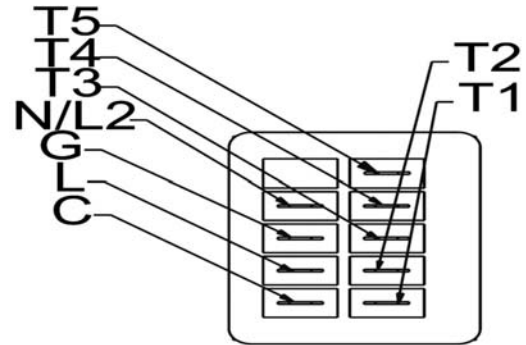


Figure 14: Constant Torque Motor Terminals

⚠ WARNING

To avoid personal injury or property damage, make certain that the motor leads cannot come into contact with non-insulated metal components of the unit.

Terminal	Connection
C	Speed Tap Common - 24 VAC Common
L	Supply Voltage - 240 Vac Line 1
G	Ground Connection
N/L2	Supply Voltage - 240 Vac Line 2
1	Low Speed Tap - 24 VAC Input
2	Medium-Low Speed Tap - 24 VAC Input
3	Medium Speed Tap - 24 VAC Input
4	Medium-High Speed Tap - 24 VAC Input
5	High Speed Tap - 24 VAC Input

Table 1: Constant Torque Motor Terminals

Cooling Mode

Time Delay Relay - If 24 volts is not present on the “G” wire from the thermostat check the thermostat. If 24 volts is present, check the #3 and #1 terminal on the time delay relay. Terminal #3 is the 24 VAC line side of the relay and #1 is the load side of the relay. If you have 24 VAC on terminal #3 but not on terminal #1 wait for the selected delay to time out. If 24 VAC is not present on terminal #1 after the selected time delay has expired, then replace the relay.

PSC Blower Isolation Relay Cooling Operation– If there is not 230 VAC between terminal #4 and L2 on the isolation relay, check terminal #2 on the isolation relay and L2 for 230 VAC. If 230 VAC is not present check the circuit breakers or the service disconnect. If 230 VAC is present check for 24 VAC on terminals #1 and #3 on the relay. If 24 VAC is present, then, replace the relay.

PSC Blower Isolation Relay Heating Operation

If there is not 230 VAC between terminal #6 and L2 on the terminal block, check terminal #5 and L2 on the relay for 230 VAC. If 230 VAC is not present check the circuit breakers or the service disconnect. If 230 VAC is present check terminals #1 and #3 for 24 VAC. If 24 VAC is present, then, replace the relay.

Hydronic Control Board – Power Supply

Check to determine if 120 VAC is present between L1 and L2/N. If 120 VAC is not present check the circuit breakers or inline switches to make sure they are in the ON position. If 120 VAC is present check to determine if 24 VAC is present

across the “R” and 24V COM terminals. If 24 VAC is not present, check across the “Rin” and COM terminals. If 24 VAC is present check the fuse on the board and replace if necessary. If 24 VAC is not present check the transformer and replace if necessary.

Hydronic Control Board - Heating Mode

If 24 volts is present between the “W” and “24V COM” terminals. If 24 VAC is not present on the “W” terminal check the thermostat. If there is 24 VAC “W” terminal, check the AQ jumper to make sure it is in the “OFF” position or if the AQ jumper is suppose to be in the on position check the aquastat. If it is open when the water line is cold it must be replaced.

Hydronic Control Board - Cooling Mode

If 24 volts is not present between the “Y” and “24V COM” terminals check the thermostat. If 24 VAC is present on the “Y” terminal and the COM terminal check the “FAN CIR” terminal and the COM terminal on the control board for 24 VAC . If there is 24 VAC on these terminals and 120 VAC on the motor L1 and L2/N terminals replace the motor.

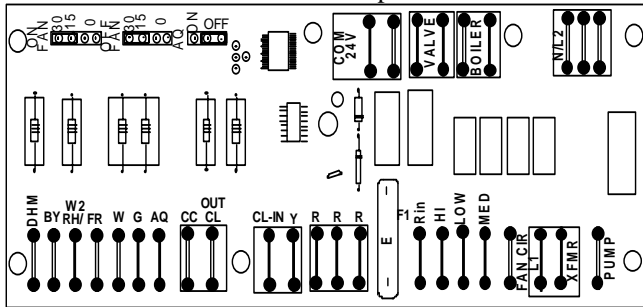


Figure 15: AY1015 Hydronic Control Board for Constant Torque Blower Motors

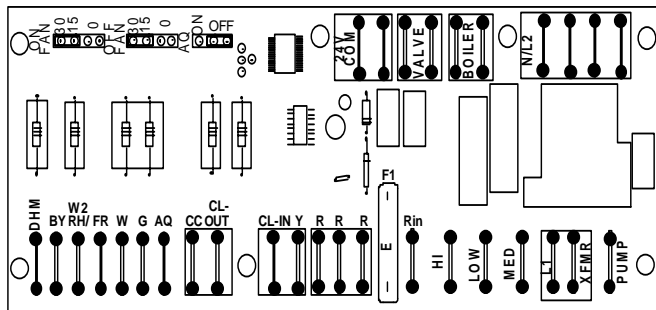


Figure 16: AY1014 Hydronic Control Board for PSC Blower Motors

WARNING

To avoid personal injury or property damage, make certain that the motor leads cannot come into contact with non-insulated metal components of the unit.

Heater Element Is Not On

Check for 240 VAC between each of the heater elements. If 240 VAC is present, check the current draw on each heater. If there is almost no current draw or the current draw is not close to what is shown below then the heater is defective and needs to be replaced.

The heater amps are as follows:

3 kW Heater = 12.5 amps	5 kW Heater = 20.8 amps
6 kW Heater = 25.0 amps	8 kW Heater = 33.3 amps
10 kW Heater = 41.6 amps	

The heater design is as follows:

The 3 kW model has two 1.5 kW heater elements.
 The 5 kW model has two 2.5 kW heater elements.
 The 6 kW model has two 3.0 kW heater elements.
 The 8 kW model has two 4.0 kW heater elements.
 The 10 kW model has two 5.0 kW heater elements.
 DP - Double Pole Contactor

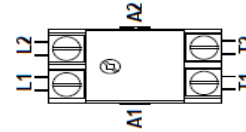


Figure 17: Electric Heater Contactor Terminal Designations

HP	PSC	CT	ECM
1/4	2.00	0.72	0.78
1/3	3.00		

Table 2: 208 / 240 VAC Blower Motor Tested FLA

HP	PSC
1/4	4.40
1/3	7.70

Table 3: 120 VAC Blower Motor Tested FLA

Replacing the PSC Blower Motor

- 1 Turn off all electrical supply circuits to the Air Handler unit at the main service panel.
- 2 Open the ceiling access panel by removing the thumb screws. Be careful to avoid getting hit by the panel as it swings downward.
- 3 Remove the four (4) screws that secure the motor guard to the control box.
- 4 Disconnect the blower motor power wires from the relay and the contactor.
- 5 Remove the strain relief that is securing the wires to the control box and remove the blower motor wires from the control box.
- 6 Remove the control box cover by removing the two (2) screws that are securing the cover to the Air Handler unit.
- 7 Remove the two screws on the blower mount plate located on the right side, the left side, the screw on the top center and the screw in the control box. Refer to Figure 18 for screw locations.

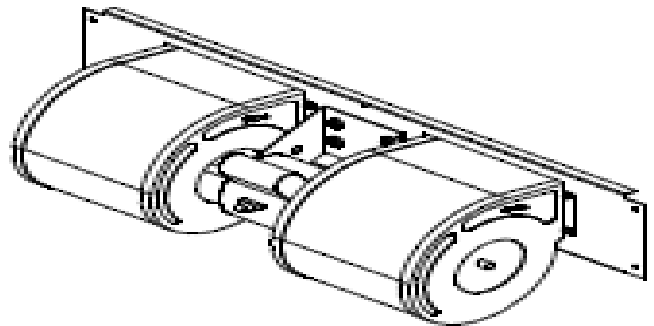


Figure 18: Blower Assembly Removal

- 8 Grab the blowers and lift the panel up and pull out on the bottom. Slide the panel down and out of the Air Handler chassis.
- 9 Rotate the blower housing so you are looking at the wheel from the discharge side of the blower. Use a hex key to loosen the set screws that secure the blower wheels to the motor shaft.
- 10 Remove the screws that secure the both blower housings to the blower mount plate.
- 11 Remove the blower housings and wheels by sliding the blower housings and wheels “off” the motor shaft.
- 12 Remove the blower motor from the mount bracket by placing a straight edge screw driver on the “U” shaped part of the clip. Push the clip in and up from the bracket to pop the clip off the bracket.
- 13 After both motor mount retaining clips have been removed; the motor it can be removed the motor mount bracket.

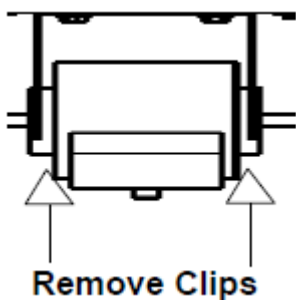


Figure 19: Blower Motor Removal

- 14 Install the new blower motor on the mount bracket. Place one end of the retaining clip into the notch on the motor mount bracket. Use a straight edge screw driver and a mallet on the “U” shaped part of the retaining clip, that were removed in step #12.,to push the clip down and into the notch. Do the same thing on the other clip so it sets into the notch on the bracket.
- 15 Replace both of the blower housings by sliding the blower wheels “on” the motor shaft.
- 16 Set the blower housing in the correct position on the blower mount plate and secure the blower housings with the screws that were removed.

SECTION VI: BLOWER PERFORMANCE

SEHX / CEHX / SCWE / CCWE	Blower Motor			No. of Blowers	Blower Wheel Size	DX Rows	CFM @ External Static Pressure - Hi Speed				
	HP	Type	Volts				0.10"	0.15"	0.20"	0.25"	0.30"
18-**-**-1C79	1/4	PSC	208/240	2	6.25 x 6.88	3	765	740	720	700	680
19-**-**-1C79	1/4	PSC	208/240	2	6.25 x 6.88	4	855	830	805	785	765
24-**-**-1C79	1/4	PSC	208/240	2	6.25 x 6.88	3	890	875	850	825	805
25-**-**-1C65	1/4	PSC	208/240	2	6.25 x 8.00	4	1100	1070	1040	1020	985
30-**-**-1C65	1/4	PSC	208/240	2	6.25 x 8.00	3	1115	1085	1055	1025	1000
31-**-**-1C65	1/4	PSC	208/240	2	6.25 x 8.00	4	1100	1070	1040	1020	985
34-**-**-1C65	1/4	PSC	208/240	2	6.25 x 8.00	3	1172	1133	1084	1059	1029
35-**-**-1C65	1/4	PSC	208/240	2	6.25 x 8.00	4	1138	1108	1049	1024	995
36-**-**-1C65	1/4	PSC	208/240	2	6.25 x 8.00	3	1190	1150	1100	1075	1045
37-**-**-1C65	1/4	PSC	208/240	2	6.25 x 8.00	4	1155	1125	1065	1040	1010

Table 4: SEHX/CEHX/SCWE/CCWE Blower Performance - PSC Motor -Without Air Filters

- 17 Rotate the blower housing so you are looking at the wheel from the discharge of the blower. Center the blower wheels in the housing then use a hex key to tighten the set screws and secure the blower wheels to the flat on the motor shaft.
- 18 Grab the blowers and lift the panel up, push in on the bottom, then pull down to set the blower mount plate in place.
- 19 Replace the two screws on the blower mount plate located on the right side, the left side, the screw on the top center and the screw in the control box. Refer to Figure 18 for screw locations.
- 20 Place the motor wires into the control box and replace the strain relief that is securing the wires to the control box.
- 21 Reconnect the blower motor power wires from the relay or contactor.
- 22 Replace the control box cover and secure with the screws that were removed.
- 23 Close the ceiling access panel and secure the panel with the thumb screws that were removed.
- 24 Turn on all electrical supply circuits to the Air Handler unit at the main service panel.
- 25 Set the thermostat to the desired temperature.

⚠ WARNING

To avoid personal injury take precautions not come into contact with non-insulated electrical components.

Avoid wearing loose clothing or any items that can come in contact with moving parts, such as the blower wheel. This can cause serious personal injury

SEHX / CEHX / SCWE / CCWE	Blower Motor			No. of Blowers	Blower Wheel Size	DX Rows	CFM @ External Static Pressure - Hi Speed				
	HP	Type	Volts				0.10"	0.15"	0.20"	0.25"	0.30"
19-**-**-1C79	1/4	PSC	208/240	2	6.25 x 6.88	5	798	769	739	700	662
25-**-**-1C65	1/4	PSC	208/240	2	6.25 x 8.00	5	933	891	848	825	781
35-**-**-1C65	1/4	PSC	208/240	2	6.25 x 8.00	5	986	945	904	860	818
37-**-**-1C65	1/4	PSC	208/240	2	6.25 x 8.00	5	1131	1101	1071	1025	993

Table 5: SEHX/CEHX/SCWE/CCWE Blower Performance – Constant Torque Motor -Without Air Filters

SEHX / CEHX / SCWE / CCWE	Blower Motor			No. of Blowers	Blower Wheel Size	DX Rows	CFM @ External Static Pressure (TAP 5)					
	HP	Type	Volts				0.10	0.20	0.25	0.30	0.40	0.50
19-**-**-1C80	1/3	C.T.	208/240	2	7.00 x 8.00	5	921	876	859	842	788	742
25-**-**-1C81	1/2	C.T.	208/240	2	7.00 x 9.00	5	1110	1047	1005	993	925	873
35-**-**-1C81	1/2	C.T.	208/240	2	7.00 x 9.00	5	1369	1307	1262	1226	1157	1089
37-**-**-1C81	1/2	C.T.	208/240	2	7.00 x 9.00	5	1415	1364	1321	1287	1220	1155

Table 6: SEHX/CEHX/SCWE/CCWE Blower Performance – Constant Torque Motor -Without Air Filters

SEHX / CEHX / SCWE / CCWE	Blower Motor			No. of Blowers	Blower Wheel Size	DX Rows	CFM @ External Static Pressure (TAP 4)					
	HP	Type	Volts				0.10	0.20	0.25	0.30	0.40	0.50
19-**-**-1C80	1/3	C.T.	208/240	2	7.00 x 8.00	5	821	777	754	738	689	640
25-**-**-1C81	1/2	C.T.	208/240	2	7.00 x 9.00	5	1010	932	896	877	821	758
35-**-**-1C81	1/2	C.T.	208/240	2	7.00 x 9.00	5	1262	1200	1162	1135	1077	1010
37-**-**-1C81	1/2	C.T.	208/240	2	7.00 x 9.00	5	1277	1215	1204	1166	1098	1045

Table 7: SEHX/CEHX/SCWE/CCWE Blower Performance – Constant Torque Motor -Without Air Filters

SEHX / CEHX / SCWE / CCWE	Blower Motor			No. of Blowers	Blower Wheel Size	DX Rows	CFM @ External Static Pressure (TAP 3)					
	HP	Type	Volts				0.10	0.20	0.25	0.30	0.40	0.50
19-**-**-1C80	1/3	C.T.	208/240	2	7.00 x 8.00	5	761	722	697	676	626	578
25-**-**-1C81	1/2	C.T.	208/240	2	7.00 x 9.00	5	896	818	789	777	694	641
35-**-**-1C81	1/2	C.T.	208/240	2	7.00 x 9.00	5	1173	1095	1065	1035	965	889
37-**-**-1C81	1/2	C.T.	208/240	2	7.00 x 9.00	5	1177	1122	1093	1063	1001	934

Table 8: SEHX/CEHX/SCWE/CCWE Blower Performance – Constant Torque Motor -Without Air Filters

SEHX / CEHX / SCWE / CCWE	Blower Motor			No. of Blowers	Blower Wheel Size	DX Rows	CFM @ External Static Pressure (TAP 2)					
	HP	Type	Volts				0.10	0.20	0.25	0.30	0.40	0.50
19-**-**-1C80	1/3	C.T.	208/240	2	7.00 x 8.00	5	640	583	557	530	478	465
25-**-**-1C81	1/2	C.T.	208/240	2	7.00 x 9.00	5	749	680	646	625	550	492
35-**-**-1C81	1/2	C.T.	208/240	2	7.00 x 9.00	5	1059	971	951	910	822	749
37-**-**-1C81	1/2	C.T.	208/240	2	7.00 x 9.00	5	1069	1001	961	920	855	777

Table 9: SEHX/CEHX/SCWE/CCWE Blower Performance – Constant Torque Motor -Without Air Filters

SEHX / CEHX / SCWE / CCWE	Blower Motor			No. of Blowers	Blower Wheel Size	DX Rows	CFM @ External Static Pressure (TAP 1)					
	HP	Type	Volts				0.10	0.20	0.25	0.30	0.40	0.50
19-**-**-1C80	1/3	C.T.	208/240	2	7.00 x 8.00	5	562	502	478	453	402	352
25-**-**-1C81	1/2	C.T.	208/240	2	7.00 x 9.00	5	611	540	497	486	410	352
35-**-**-1C81	1/2	C.T.	208/240	2	7.00 x 9.00	5	978	896	852	814	732	677
37-**-**-1C81	1/2	C.T.	208/240	2	7.00 x 9.00	5	987	913	870	840	760	698

Table 10: SDXW/CCXW/SCWW/CCWW Blower Performance – PSC Motors -Without Air Filters

SDXW / CDXW SCWW / CCWW	Blower Motor			No. of Blowers	Blower Wheel Size	DX Rows	CFM @ External Static Pressure - Hi Speed				
	HP	Type	Volts				0.10"	0.15"	0.20"	0.25"	0.30"
18-21-**-1A78	1/4	PSC	120	2	6.25 x 6.88	3	765	740	720	700	680
19-21-**-1A78	1/4	PSC	120	2	6.25 x 6.88	4	855	830	805	785	765
24-23-**-1A78	1/4	PSC	120	2	6.25 x 6.88	3	890	875	850	825	805
25-33-**-1A70	1/4	PSC	120	2	6.25 x 8.00	4	1100	1070	1040	1020	985
30-27-**-1A70	1/4	PSC	120	2	6.25 x 8.00	3	1115	1085	1055	1025	1000
31-28-**-1A70	1/4	PSC	120	2	6.25 x 8.00	4	1100	1070	1040	1020	985
34-30-**-1A70	1/4	PSC	120	2	6.25 x 8.00	3	1172	1133	1084	1059	1029
35-30-**-1A70	1/4	PSC	120	2	6.25 x 8.00	4	1138	1108	1049	1024	995
36-35-**-1A70	1/4	PSC	120	2	6.25 x 8.00	3	1190	1150	1100	1075	1045
37-32-**-1A70	1/4	PSC	120	2	6.25 x 8.00	4	1155	1125	1065	1040	990

Table 11: SDXW/CCXW/SCWW/CCWW Blower Performance – PSC Motors -Without Air Filters

SDXW / CDXW SCWW / CCWW	Blower Motor			No. of Blowers	Blower Wheel Size	DX Rows	CFM @ External Static Pressure Tap 5					
	HP	Type	Volts				0.10"	0.20"	0.25"	0.30"	0.40"	0.50"
18-21-**-1A82	1/3	C.T.	120	2	7.00 x 8.00	3	917	881	861	840	792	746
19-21-**-1A82	1/3	C.T.	120	2	7.00 x 8.00	4	917	881	861	840	792	746
24-23-**-1A82	1/3	C.T.	120	2	7.00 x 8.00	3	917	881	861	840	792	746
25-33-**-1A83	1/2	C.T.	120	2	7.00 x 9.00	4	1075	1023	1000	973	919	862
30-27-**-1A83	1/2	C.T.	120	2	7.00 x 9.00	3	1072	1023	1000	973	919	862
31-28-**-1A83	1/2	C.T.	120	2	7.00 x 9.00	4	1072	1023	1000	973	919	862
34-30-**-1A83	1/2	C.T.	120	2	7.00 x 9.00	3	1294	1245	1214	1182	1117	1041
35-30-**-1A83	1/2	C.T.	120	2	7.00 x 9.00	4	1294	1245	1214	1182	1117	1041
36-35-**-1A83	1/2	C.T.	120	2	7.00 x 9.00	3	1362	1311	1287	1253	1202	1142
37-32-**-1A83	1/2	C.T.	120	2	7.00 x 9.00	4	1362	1311	1287	1253	1202	1142

Table 12: SDXW/CCXW/SCWW/CCWW Blower Performance – Constant Torque Motors -Without Air Filters

SDXW / CDXW SCWW / CCWW	Blower Motor			No. of Blowers	Blower Wheel Size	DX Rows	CFM @ External Static Pressure Tap 4					
	HP	Type	Volts				0.10"	0.20"	0.25"	0.30"	0.40"	0.50"
18-21-**-1A82	1/3	C.T.	120	2	7.00 x 8.00	3	810	773	758	734	696	657
19-21-**-1A82	1/3	C.T.	120	2	7.00 x 8.00	4	810	773	758	734	696	657
24-23-**-1A82	1/3	C.T.	120	2	7.00 x 8.00	3	810	773	758	734	696	657
25-33-**-1A83	1/2	C.T.	120	2	7.00 x 9.00	4	976	922	900	869	813	756
30-27-**-1A83	1/2	C.T.	120	2	7.00 x 9.00	3	976	922	900	869	813	756
31-28-**-1A83	1/2	C.T.	120	2	7.00 x 9.00	4	976	922	900	869	813	756
34-30-**-1A83	1/2	C.T.	120	2	7.00 x 9.00	3	1239	1181	1154	1127	1070	1009
35-30-**-1A83	1/2	C.T.	120	2	7.00 x 9.00	4	1239	1181	1154	1127	1070	1009
36-35-**-1A83	1/2	C.T.	120	2	7.00 x 9.00	3	1301	1253	1223	1197	1150	1099
37-32-**-1A83	1/2	C.T.	120	2	7.00 x 9.00	4	1301	1253	1223	1197	1150	1099

Table 13: SDXW/CCXW/SCWW/CCWW Blower Performance – Constant Torque Motors -Without Air Filters

SDXW / CDXW SCWW / CCWW	Blower Motor			No. of Blowers	Blower Wheel Size	DX Rows	CFM @ External Static Pressure Tap 3					
	HP	Type	Volts				0.10"	0.20"	0.25"	0.30"	0.40"	0.50"
18-21-**-1A82	1/3	C.T.	120	2	7.00 x 8.00	3	765	725	700	683	638	595
19-21-**-1A82	1/3	C.T.	120	2	7.00 x 8.00	4	765	725	700	683	638	595
24-23-**-1A82	1/3	C.T.	120	2	7.00 x 8.00	3	765	725	700	683	638	595
25-33-**-1A83	1/2	C.T.	120	2	7.00 x 9.00	4	888	829	800	769	704	647
30-27-**-1A83	1/2	C.T.	120	2	7.00 x 9.00	3	888	829	800	769	704	647
31-28-**-1A83	1/2	C.T.	120	2	7.00 x 9.00	4	888	829	800	769	704	647
34-30-**-1A83	1/2	C.T.	120	2	7.00 x 9.00	3	1144	1040	1062	1027	967	916
35-30-**-1A83	1/2	C.T.	120	2	7.00 x 9.00	4	1144	1040	1062	1027	967	916
36-35-**-1A83	1/2	C.T.	120	2	7.00 x 9.00	3	1178	1156	1133	1104	1052	997
37-32-**-1A83	1/2	C.T.	120	2	7.00 x 9.00	4	1178	1156	1133	1104	1052	997

Table 14: SDXW/CCXW/SCWW/CCWW Blower Performance Chart – Constant Torque Motors -Without Air Filters

SDXW / CDXW SCWW / CCWW	Blower Motor			No. of Blowers	Blower Wheel Size	DX Rows	CFM @ External Static Pressure Tap 2					
	HP	Type	Volts				0.10"	0.20"	0.25"	0.30"	0.40"	0.50"
18-21**-1A82	1/3	C.T.	120	2	7.00 x 8.00	3	616	585	562	540	492	446
19-21**-1A82	1/3	C.T.	120	2	7.00 x 8.00	4	616	585	562	540	492	446
24-23**-1A82	1/3	C.T.	120	2	7.00 x 8.00	3	616	585	562	540	492	446
25-33**-1A83	1/2	C.T.	120	2	7.00 x 9.00	4	746	678	647	604	561	504
30-27**-1A83	1/2	C.T.	120	2	7.00 x 9.00	3	746	678	647	604	561	504
31-28**-1A83	1/2	C.T.	120	2	7.00 x 9.00	4	746	678	647	604	561	504
34-30**-1A83	1/2	C.T.	120	2	7.00 x 9.00	3	1052	987	957	925	860	799
35-30**-1A83	1/2	C.T.	120	2	7.00 x 9.00	4	1052	987	957	925	860	799
36-35**-1A83	1/2	C.T.	120	2	7.00 x 9.00	3	1084	1022	1000	969	906	852

Table 15: SDXW/CCXW/SCWW/CCWW Blower Performance Chart – Constant Torque Motors -Without Air Filters

SDXW / CDXW SCWW / CCWW	Blower Motor			No. of Blowers	Blower Wheel Size	DX Rows	CFM @ External Static Pressure Tap 1					
	HP	Type	Volts				0.10"	0.20"	0.25"	0.30"	0.40"	0.50"
18-21**-1A82	1/3	C.T.	120	2	7.00 x 8.00	3	554	505	481	455	403	356
19-21**-1A82	1/3	C.T.	120	2	7.00 x 8.00	4	554	505	481	455	403	356
24-23**-1A82	1/3	C.T.	120	2	7.00 x 8.00	3	554	505	481	455	403	356
25-33**-1A83	1/2	C.T.	120	2	7.00 x 9.00	4	613	536	500	466	398	337
30-27**-1A83	1/2	C.T.	120	2	7.00 x 9.00	3	613	536	500	466	398	337
31-28**-1A83	1/2	C.T.	120	2	7.00 x 9.00	4	613	536	500	466	398	337
34-30**-1A83	1/2	C.T.	120	2	7.00 x 9.00	3	946	883	852	812	751	684
35-30**-1A83	1/2	C.T.	120	2	7.00 x 9.00	4	946	883	852	812	751	684
36-35**-1A83	1/2	C.T.	120	2	7.00 x 9.00	3	1004	943	911	881	819	754
37-32**-1A83	1/2	C.T.	120	2	7.00 x 9.00	4	1004	943	911	881	819	754

Table 16: SDXW/CCXW/SCWW/CCWW Blower Performance Chart – Constant Torque Motors -Without Air Filters

SECTION VII: ACCESSORY PARTS

Part Number	Description
CPL1	SEHX-12, SEHX-18, SEHX-19, SEHX-24 - LOUVERED - 27.5" x 43"
CPNL1	SEHX-12, SEHX-18, SEHX-19, SEHX-24 - NON-LOUVERED - 27.5" x 43"
CPL2	SEHX-25, SEHX-30, SEHX-31 - LOUVERED - 27.5" x 49"
CPNL2	SEHX-25, SEHX-30, SEHX-31 - NON-LOUVERED - 27.5" x 49"
CPL3	SEHX-34 AND SEHX-35 - LOUVERED - 27.5" x 55.5"
CPNL3	SEHX-34 AND SEHX-35 - NON-LOUVERED - 27.5" x 55.5"
CPL4	SEHX-36 AND SEHX-37 - LOUVERED - 27.5" x 62.5"
CPNL4	SEHX-36 AND SEHX-37 - NON-LOUVERED - 27.5" x 62.5"
RAP30	SEHX/SDXW/SCWE/SCWW-18-19-24 RETURN AIR PLENUM FD 30
RAP38	SEHX/SDXW/SCWE/SCWW-25-30-31 RETURN AIR PLENUM FD 38
RAP42	SEHX/SDXW/SCWE/SCWW-34-35 RETURN AIR PLENUM FD 42
RAP49	SEHX/SDXW/SCWE/SCWW-36-37 RETURN AIR PLENUM FD 49

Table 17: Accessory Parts List

SECTION VIII: REPLACEMENT PARTS

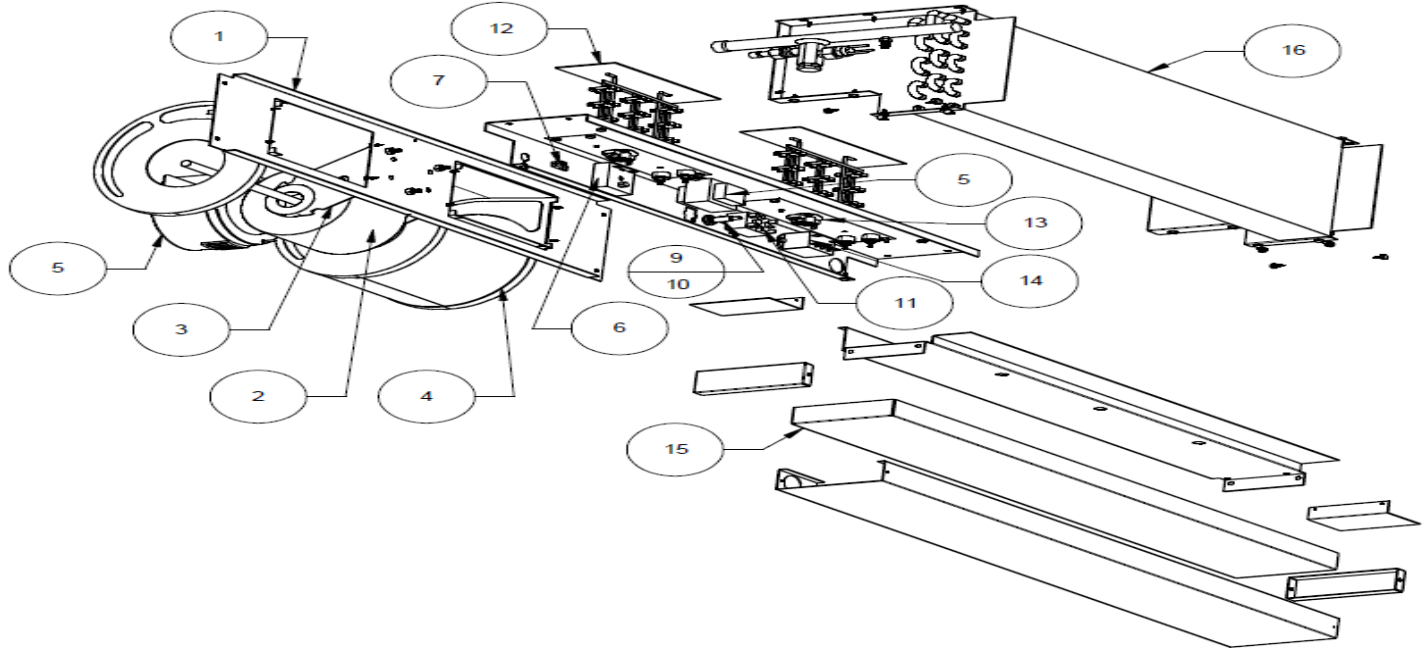


Figure 20: SEHX/ CEHX/ SCWE/ CCWE 18-24 Electric Heat Air Handler Unit Repair Parts Schematic

SEHX/CEHX/SCWE/CCWE-18-24 ELECTRIC HEAT MODELS			
Item #	Qty.	Part #	Description
1	1	R86HM0100	30-1/4-230-(2)6.29X6.69-PSC Blower Assembly
1	1	R86HM0126	30-1/3-230-(2)6.29X6.69-Selectech Blower Assembly
1	1	R86HM0122	30-1/3-120/230-(2)6.29X6.69-ECM Blower Assembly
2	1	R65BA0005	1/4 HP 208/240V Double Shaft PSC Motor
2	1	R65BV0058	1/3 HP 208/240V Double Shaft Selectech Motor
2	1	R65BV0005	1/3 HP 120/230V Double Shaft ECM Motor
3	1	R87OA0002	Motor Mount - PSC Motor
3	1	R87OA0007	Motor Mount - Selectech Motor
3	1	R87OA0013	Motor Mount - ECM Motor
4	2	R69AA0002	6.29 x 6.69 Blower Wheel 1/2" Hub - CW Rotation & Housing
5	1	R68AA0003	208/240-24V Transformer
6	1	R68AC0009	TDR ADJ TYPE Delay On Make Relay - ICM #HMPS00C2X30
7	1	R68DC0001	Ground Lug
8	1	R68DC0018	Power Terminal Block
9	1	R73MH0001	3 Amp Fuse
10	1	R73MHA001	Fuse Holder
11	1	R68AB0001	Fan Relay for PSC Motor
3 KW Electric Heat			
12	1	R86CJ1070	3 KW Element (Kit - 2 EA. 1.5 kW Heater Elements with Limits)
13	1	R68CA0001	140°F Limit Switch (Opens at 140°F - Closes at 110°F)
14	1	R68AB0019	Double Pole Electric Heat Contactor - 50 Amp Resistive
5 KW Electric Heat			
12	1	R86CJ1072	5 KW Element (Kit - 2 EA. 2.5 kW Heater Elements with Limits)
13	1	R68CA0001	140°F Limit Switch (Opens at 140°F - Closes at 110°F)
14	1	R68AB0019	Double Pole Electric Heat Contactor - 50 Amp Resistive
6 KW Electric Heat			
12	1	R86CJ1073	6 KW Element (Kit - 2 EA. 3.0 kW Heater Elements with Limits)
13	1	R68CA0001	140°F Limit Switch (Opens at 140°F - Closes at 110°F)
14	1	R68AB0019	Double Pole Electric Heat Contactor - 50 Amp Resistive
8 KW Electric Heat			
12	1	R86CJ1074	8 KW Element (Kit - 2 EA. 4.0 kW Heater Elements with Limits)
13	1	R68CA0001	140°F Limit Switch (Opens at 140°F - Closes at 110°F)
14	1	R68AB0019	Double Pole Electric Heat Contactor - 50 Amp Resistive
10 KW Electric Heat			
12	1	R86CJ1070	10 KW Element (Kit - 2 EA. 5.0 kW Heater Elements with Limits)
13	2	R68CA0001	140°F Limit Switch (Opens at 140°F - Closes at 110°F)
14	1	R68AB0019	Double Pole Electric Heat Contactor - 50 Amp Resistive
DRAIN PANS			
15	1	R87BAE001	Galvanized G90 Drain Pan With Coating for F.D. 30
16	DX COILS - There are too many DX coil models to list here. Contact factory sales rep to obtain the correct coil for you fan coil unit.		
CHILLED WATER COILS			
16	CHILLED WATER COILS - There are too many chilled water coil models to list here. Contact factory sales rep to obtain the correct coil for you fan coil unit.		

Table 18: SEHX/ CEHX/ SCWE/ CCWE 18-24 Electric Heat Air Handler Repair Parts List

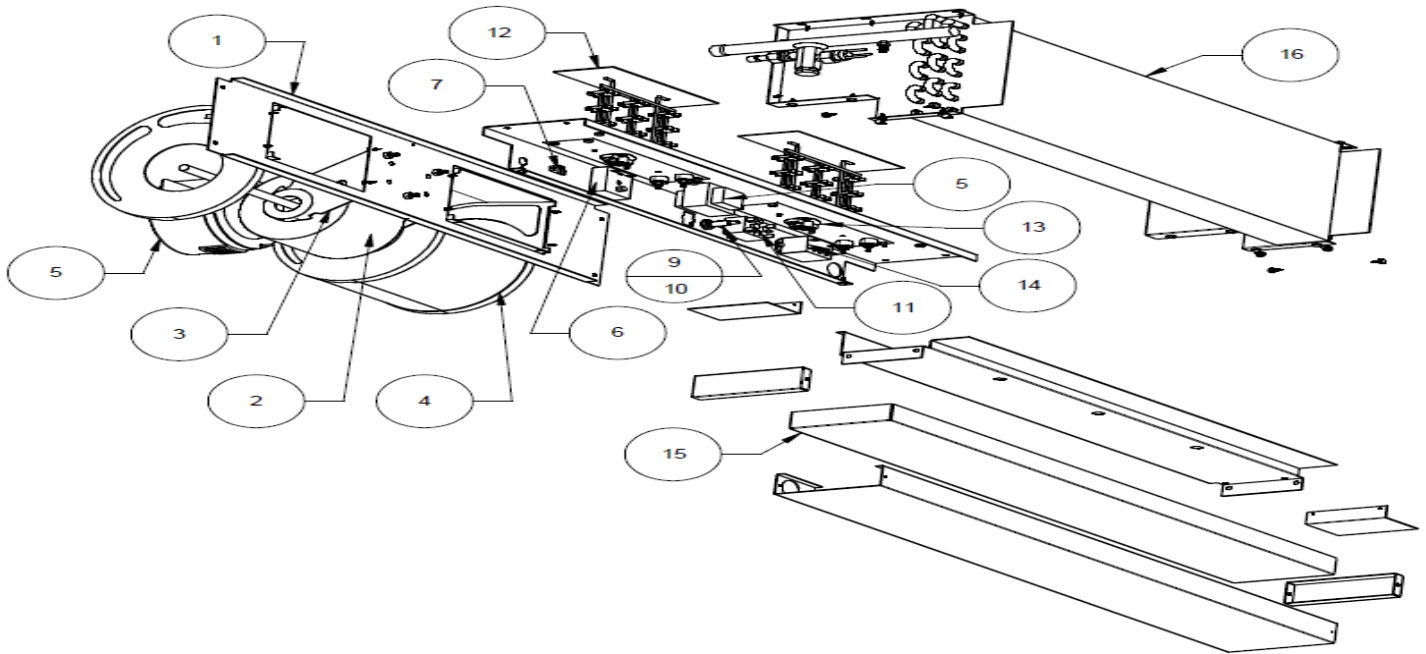


Figure 21: SEHX/ CEHX/ SCWE/ CCWE 25-30-31 Electric Heat Air Handler Unit Repair Parts Schematic

SEHX/CEHX/SCWE/CCWE-25-30-31 ELECTRIC HEAT MODELS			
Item #	Qty.	Part #	Description
1	1	R86HM0110	38-1/3-230-(2)6.29X6.69-PSC Blower Assembly
1	1	R86HM0127	38-1/3-230-(2)6.69X9.19-Selectech Blower Assembly
1	1	R86HM0123	38-1/3-120/230-(2)6.69X9.19-ECM Blower Assembly
2	1	R65BA0006	1/3 HP 208/240V Double Shaft PSC Motor
2	1	R65BV0058	1/3 HP 208/240V Double Shaft Selectech Motor
2	1	R65BV0005	1/3 HP 120/230V Double Shaft ECM Motor
3	1	R87OA0002	Motor Mount - PSC Motor
3	1	R87OA0004	Motor Mount - Selectech Motor
3	1	R87OA0013	Motor Mount - ECM Motor
4	2	R86AA0002	6.29 x 6.69 Blower Wheel 1/2" Hub - CW Rotation & Housing - PSC
4	2	R86CR0001	6.69 x 9.19 Blower Wheel 1/2" Hub - CW Rotation & Housing
5	1	R68AA0003	208/240-24V Transformer
6	1	R68AC0009	TDR ADJ TYPE Delay On Make Relay - ICM #HMPS00C2X30
7	1	R68DC0001	Ground Lug
8	1	R68DC0018	Power Terminal Block
9	1	R73MH0001	3 Amp Fuse
10	1	R73MHA001	Fuse Holder
11	1	R68AB0001	Fan Relay for PSC Motor
3 KW Electric Heat			
12	1	R86CJ1070	3 KW Element (Kit - 2 EA. 1.5 kW Heater Elements with Limits)
13	1	R68CA0001	140°F Limit Switch (Opens at 140°F - Closes at 110°F)
14	1	R68AB0019	Double Pole Electric Heat Contactor - 50 Amp Resistive
5 KW Electric Heat			
12	1	R86CJ1072	5 KW Element (Kit - 2 EA. 2.5 kW Heater Elements with Limits)
13	1	R68CA0001	140°F Limit Switch (Opens at 140°F - Closes at 110°F)
14	1	R68AB0019	Double Pole Electric Heat Contactor - 50 Amp Resistive
6 KW Electric Heat			
12	1	R86CJ1073	6 KW Element (Kit - 2 EA. 3.0 kW Heater Elements with Limits)
13	1	R68CA0001	140°F Limit Switch (Opens at 140°F - Closes at 110°F)
14	1	R68AB0019	Double Pole Electric Heat Contactor - 50 Amp Resistive
8 KW Electric Heat			
12	1	R86CJ1074	8 KW Element (Kit - 2 EA. 4.0 kW Heater Elements with Limits)
13	1	R68CA0001	140°F Limit Switch (Opens at 140°F - Closes at 110°F)
14	1	R68AB0019	Double Pole Electric Heat Contactor - 50 Amp Resistive
10 KW Electric Heat			
12	1	R86CJ1070	10 KW Element (Kit - 2 EA. 5.0 kW Heater Elements with Limits)
13	2	R68CA0001	140°F Limit Switch (Opens at 140°F - Closes at 110°F)
14	1	R68AB0019	Double Pole Electric Heat Contactor - 50 Amp Resistive
DRAIN PANS			
15	1	R87BAE002	Galvanized G90 Drain Pan With Coating for F.D. 38
DX COILS			
16	DX COILS - There are too many DX coil models to list here. Contact factory sales rep to obtain the correct coil for you fan coil unit.		
CHILLED WATER COILS			
16	CHILLED WATER COILS - There are too many chilled water coil models to list here. Contact factory sales rep to obtain the correct coil for you fan coil unit.		

Table 19: SEHX/ CEHX/ SCWE/ CCWE 25-30-31 Electric Heat Air Handler Unit Repair Parts List

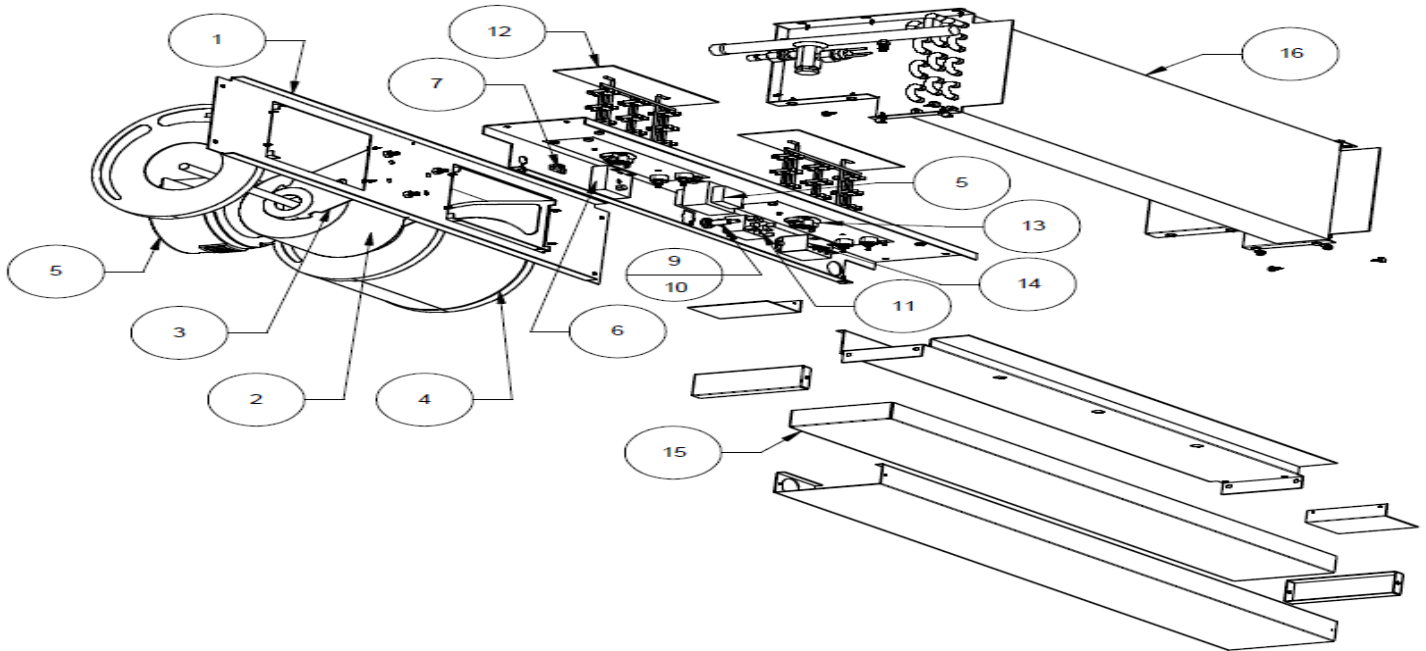


Figure 22: SEHX/ CEHX/ SCWE/ CCWE 34-35 Electric Heat Air Handler Unit Repair Parts Schematic

SEHX/CEHX/SCWE/CCWE-34-35 ELECTRIC HEAT MODELS			
Item #	Qty.	Part #	Description
1	1	R86HM0112	42-1/3-230-(2)6.29X6.69-PSC Blower Assembly
1	1	R86HM0128	42-3/4-230-(2)6.69X9.19-Selectech Blower Assembly
1	1	R86HM0124	42-3/4-120/230-(2)6.69X9.19-ECM Blower Assembly
2	1	R65BA0006	1/3 HP 208/240V Double Shaft PSC Motor
2	1	R65BV0060	3/4 HP 208/240V Double Shaft Selectech Motor
2	1	R65BV0006	3/4 HP 120/230V Double Shaft ECM Motor
3	1	R87OA0002	Motor Mount - PSC Motor
3	1	R87OA0004	Motor Mount - Selectech Motor
3	1	R87OA0014	Motor Mount - ECM Motor
4	2	R86AA0002	6.29 x 6.69 Blower Wheel 1/2" Hub - CW Rotation & Housing - PSC
4	2	R86CR0001	6.69 x 9.19 Blower Wheel 1/2" Hub - CW Rotation & Housing
5	1	R68AA0003	208/240-24V Transformer
6	1	R68AC0009	TDR ADJ TYPE Delay On Make Relay - HMPS00C2X30
7	1	R68DC0001	Ground Lug
8	1	R68DC0018	Power Terminal Block
9	1	R73MH0001	3 Amp Fuse
10	1	R73MHA001	Fuse Holder
11	1	R68AB0001	Fan Relay for PSC Motor
3 KW Electric Heat			
12	1	R86CJ1070	3 KW Element (Kit - 2 EA. 1.5 kW Heater Elements with Limits)
13	1	R68CA0001	140°F Limit Switch (Opens at 140°F - Closes at 110°F)
14	1	R68AB0019	Double Pole Electric Heat Contactor - 50 Amp Resistive
5 KW Electric Heat			
12	1	R86CJ1072	5 KW Element (Kit - 2 EA. 2.5 kW Heater Elements with Limits)
13	1	R68CA0001	140°F Limit Switch (Opens at 140°F - Closes at 110°F)
14	1	R68AB0019	Double Pole Electric Heat Contactor - 50 Amp Resistive
6 KW Electric Heat			
12	1	R86CJ1073	6 KW Element (Kit - 2 EA. 3.0 kW Heater Elements with Limits)
13	1	R68CA0001	140°F Limit Switch (Opens at 140°F - Closes at 110°F)
14	1	R68AB0019	Double Pole Electric Heat Contactor - 50 Amp Resistive
8 KW Electric Heat			
12	1	R86CJ1074	8 KW Element (Kit - 2 EA. 4.0 kW Heater Elements with Limits)
13	1	R68CA0001	140°F Limit Switch (Opens at 140°F - Closes at 110°F)
14	1	R68AB0019	Double Pole Electric Heat Contactor - 50 Amp Resistive
10 KW Electric Heat			
12	1	R86CJ1070	10 KW Element (Kit - 2 EA. 5.0 kW Heater Elements with Limits)
13	2	R68CA0001	140°F Limit Switch (Opens at 140°F - Closes at 110°F)
14	1	R68AB0019	Double Pole Electric Heat Contactor - 50 Amp Resistive
DRAIN PANS			
15	1	R87BAE004	Galvanized G90 Drain Pan With Coating for F.D. 42
DX COILS			
16	<p style="text-align: center;">DX COILS - There are too many DX coil models to list here. Contact factory sales rep to obtain the correct coil for you fan coil unit.</p>		
CHILLED WATER COILS			
16	<p style="text-align: center;">CHILLED WATER COILS - There are too many chilled water coil models to list here. Contact factory sales rep to obtain the correct coil for you fan coil unit.</p>		

Table 20: SEHX/ CEHX/ SCWE/ CCWE 34-35 Electric Heat Air Handler Unit Repair Parts List

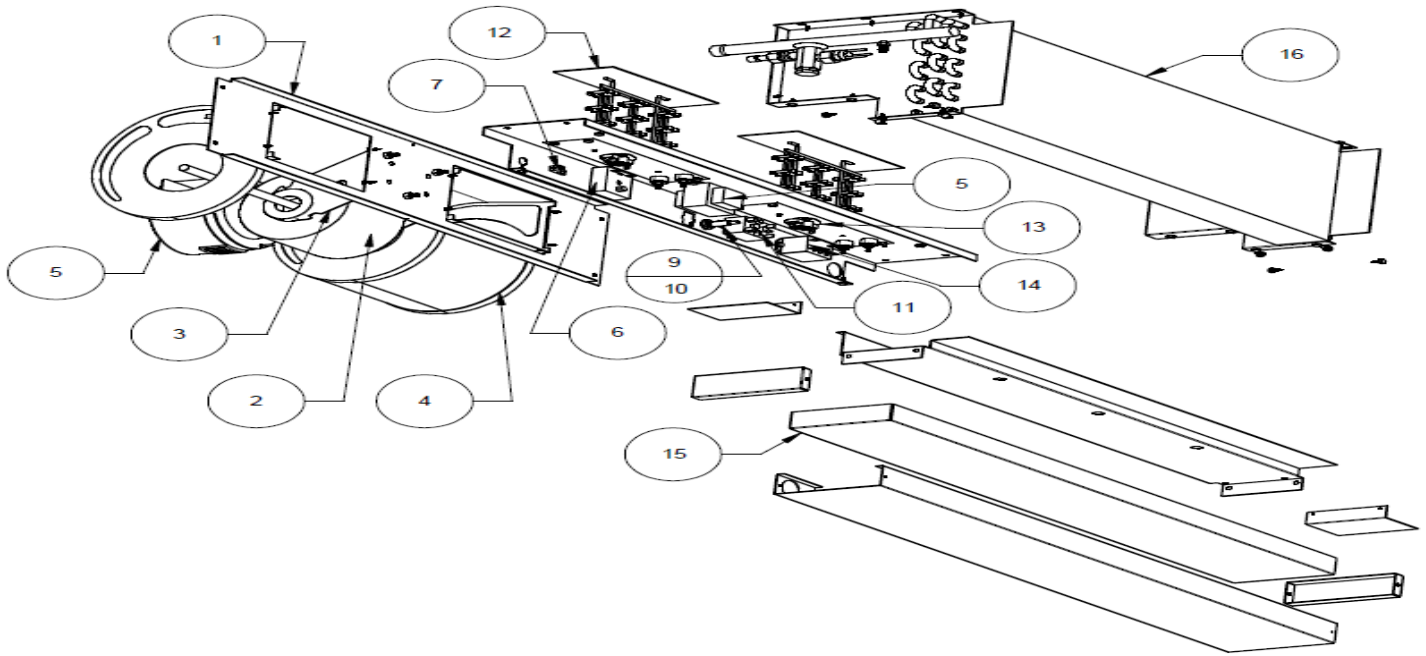


Figure 23: SEHX/ CEHX/ SCWE/ CCWE 36-37 Electric Heat Air Handler Unit Repair Parts Schematic

SEHX/CEHX/SCWE/CCWE-36-37 ELECTRIC HEAT MODELS			
Item #	Qty.	Part #	Description
1	1	R86HM0114	49-1/3-230-(2)6.29X6.69-PSC Blower Assembly
1	1	R86HM0129	49-3/4-230-(2)6.69X9.19-Selectech Blower Assembly
1	1	R86HM0125	49-3/4-120/230-(2)6.69X9.19-ECM Blower Assembly
2	1	R65BA0006	1/3 HP 208/240V Double Shaft PSC Motor
2	1	R65BV0060	3/4 HP 208/240V Double Shaft Selectech Motor
2	1	R65BV0006	3/4 HP 120/230V Double Shaft ECM Motor
3	1	R87OA0002	Motor Mount - PSC Motor
3	1	R87OA0004	Motor Mount - Selectech Motor
3	1	R87OA0014	Motor Mount - ECM Motor
4	2	R86AA0002	6.29 x 6.69 Blower Wheel 1/2" Hub - CW Rotation & Housing - PSC
4	2	R86CR0001	6.69 x 9.19 Blower Wheel 1/2" Hub - CW Rotation & Housing
5	1	R68AA0003	208/240-24V Transformer
6	1	R68AC0009	TDR ADJ TYPE Delay On Make Relay - HMPS00C2X30
7	1	R68DC0001	Ground Lug
8	1	R68DC0018	Power Terminal Block
9	1	R73MH0001	3 Amp Fuse
10	1	R73MHA001	Fuse Holder
11	1	R68AB0001	Fan Relay for PSC Motor
3 KW Electric Heat			
12	1	R86CJ1070	3 KW Element (Kit - 2 EA. 1.5 kW Heater Elements with Limits)
13	1	R68CA0001	140°F Limit Switch (Opens at 140°F - Closes at 110°F)
14	1	R68AB0019	Double Pole Electric Heat Contactor - 50 Amp Resistive
5 KW Electric Heat			
12	1	R86CJ1072	5 KW Element (Kit - 2 EA. 2.5 kW Heater Elements with Limits)
13	1	R68CA0001	140°F Limit Switch (Opens at 140°F - Closes at 110°F)
14	1	R68AB0019	Double Pole Electric Heat Contactor - 50 Amp Resistive
6 KW Electric Heat			
12	1	R86CJ1073	6 KW Element (Kit - 2 EA. 3.0 kW Heater Elements with Limits)
13	1	R68CA0001	140°F Limit Switch (Opens at 140°F - Closes at 110°F)
14	1	R68AB0019	Double Pole Electric Heat Contactor - 50 Amp Resistive
8 KW Electric Heat			
12	1	R86CJ1074	8 KW Element (Kit - 2 EA. 4.0 kW Heater Elements with Limits)
13	1	R68CA0001	140°F Limit Switch (Opens at 140°F - Closes at 110°F)
14	1	R68AB0019	Double Pole Electric Heat Contactor - 50 Amp Resistive
10 KW Electric Heat			
12	1	R86CJ1070	10 KW Element (Kit - 2 EA. 5.0 kW Heater Elements with Limits)
13	2	R68CA0001	140°F Limit Switch (Opens at 140°F - Closes at 110°F)
14	1	R68AB0019	Double Pole Electric Heat Contactor - 50 Amp Resistive
DRAIN PANS			
15	1	R87BAE003	Galvanized G90 Drain Pan With Coating for F.D. 49
DX COILS			
16	DX COILS - There are too many DX coil models to list here. Contact factory sales rep to obtain the correct coil for you fan coil unit.		
CHILLED WATER COILS			
16	CHILLED WATER COILS - There are too many chilled water coil models to list here. Contact factory sales rep to obtain the correct coil for you fan coil unit.		

Table 21: SEHX/ CEHX/ SCWE/ CCWE 36-37 Electric Heat Air Handler Unit Repair Parts List

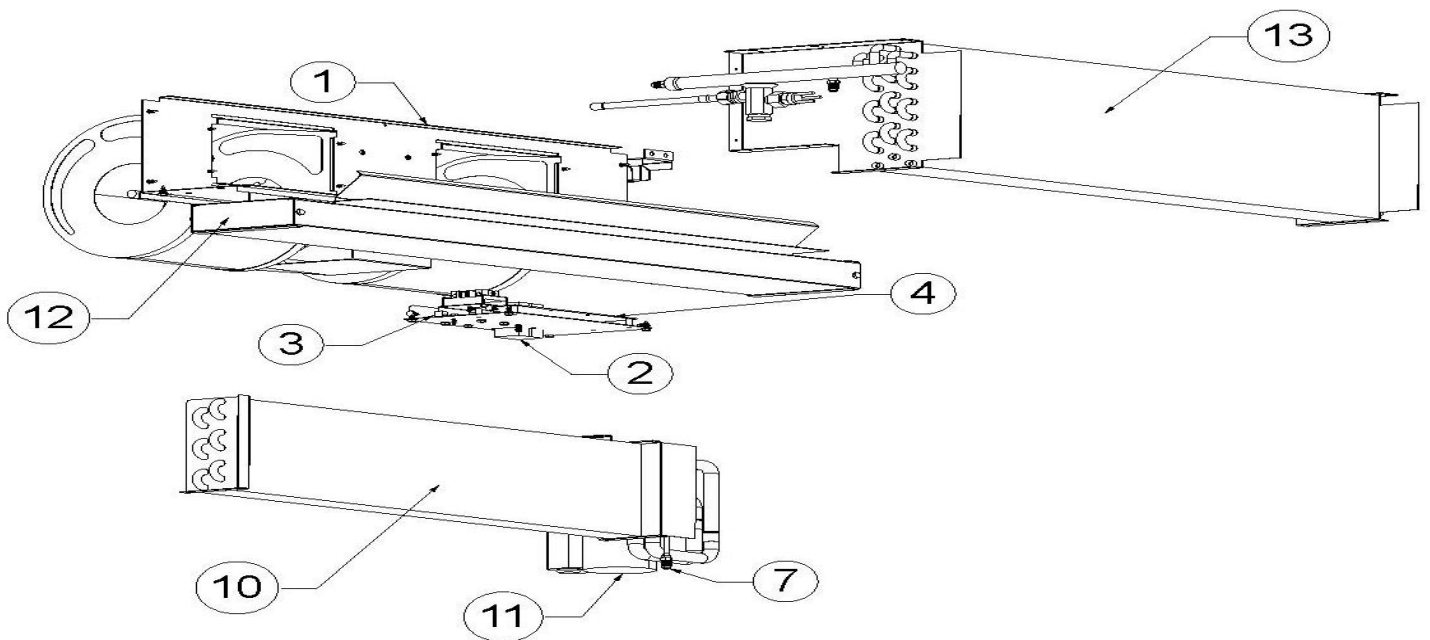


Figure 24: SDXW/ CDXW/ SCWW/ CCWW 18-24 Hydronic Heat Air Handler Unit Repair Parts Schematic

SDXW/CDXW/SCWW/CCWW-18-24 HYDRONIC HEAT MODELS			
Item #	Qty.	Part #	Description
1	1	R86HM0078	78-1/4-115-(2)6.25X6.88-PSC Blower Assembly
1	1	R86HM0082FD	82-1/3-120-(2)7.00X8.00-Selectech Blower Assembly
2	1	R68AA0002	120-24V Transformer
3	1	R68DC0001	Ground Lug
4	1	R68AE0010	ICM AY1014 Hydronic Control Board for PSC Blower Motors
4	1	R68AE0011	ICM AY1015 Hydronic Control Board for CT Blower Motors
5	1	R68DD0005	White Wire Freeze Protector
6	1	R66AB0006	Sensor Clip HW/AH
7	1	R74BA0004	Valve - Air Bleed Body
8	1	R74BA0005	Valve - Air Bleed Core
9	1	R74BB0001	1/2" Boiler Drain
10	1	R86BC0001	2 Row Hot Water Coil 6 x 27
11	1	R78AA0007	4 GPM Taco Circulating Pump 120V - 1/2" Inlet and Outlet
DRAIN PANS			
12	1	R87BAE001	Galvanized G90 Drain Pan With Coating for F.D. 30
DX COILS			
13	DX COILS - There are too many DX coil models to list here. Contact factory sales rep to obtain the correct coil for you fan coil unit.		
CHILLED WATER COILS			
14	CHILLED WATER COILS - There are too many chilled water coil models to list here. Contact factory sales rep to obtain the correct coil for you fan coil unit.		

Table 22: SDXW/ CDXW/ SCWW/ CCWW 18-24 Hydronic Heat Air Handler Unit Repair Parts List

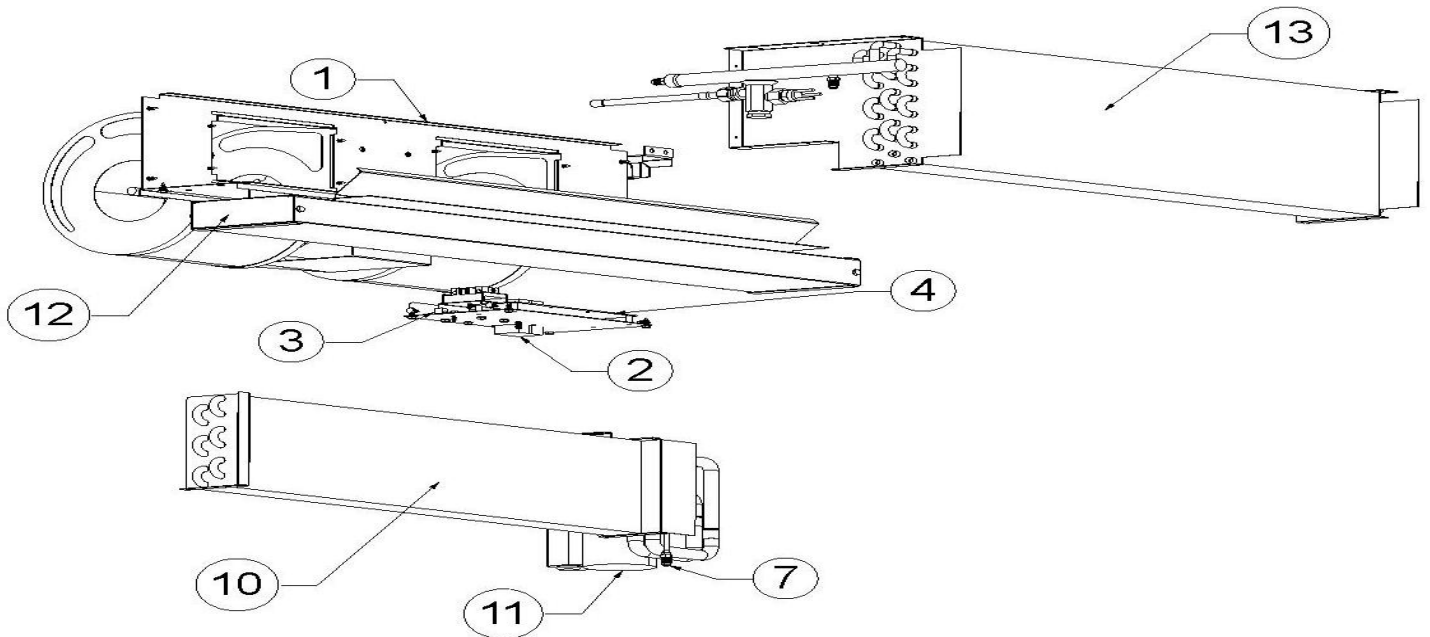


Figure 25: SDXW/ CDXW/ SCWW/ CCWW 25-30-31 Hydronic Heat Air Handler Unit Repair Parts Schematic

SDXW/CDXW/SCWW/CCWW-25-30-31 HYDRONIC HEAT MODELS			
Item #	Qty.	Part #	Description
1	1	R86HM0070	70-1/4-115-(2)6.25X8.00-PSC Blower Assembly
1	1	R86HM0083FD	83-1/2-115-(2)7.00X9.00-Selectech Blower Assembly
2	1	R68AA0002	120-24V Transformer
3	1	R68DC0001	Ground Lug
4	1	R68AE0010	ICM AY1014 Hydronic Control Board for PSC Blower Motors
4	1	R68AE0011	ICM AY1015 Hydronic Control Board for CT Blower Motors
5	1	R68DD0005	White Wire Freeze Protector
6	1	R66AB0006	Sensor Clip HW/AH
7	1	R74BA0004	Valve - Air Bleed Body
8	1	R74BA0005	Valve - Air Bleed Core
9	1	R74BB0001	1/2" Boiler Drain
10	1	R86BC0002	2 Row Hot Water Coil 6 x 35
11	1	R78AA0007	Standard 4 GPM Circulating Pump 120V - 1/2" Inlet and Outlet
11	1	R78AA0008	Optional 7 GPM Pump 120V - 3/4" Inlet and Outlet
DRAIN PANS (PLASTIC)			
12	1	R87BAE002	Galvanized G90 Drain Pan With Coating for F.D. 38
13	DX COILS - There are too many DX coil models to list here. Contact factory sales rep to obtain the correct coil for you fan coil unit.		
CHILLED WATER COILS			
14	CHILLED WATER COILS - There are too many chilled water coil models to list here. Contact factory sales rep to obtain the correct coil for you fan coil unit.		

Table 23: SDXW/ CDXW/ SCWW/ CCWW 25-30-31 Hydronic Heat Air Handler Unit Repair Parts List

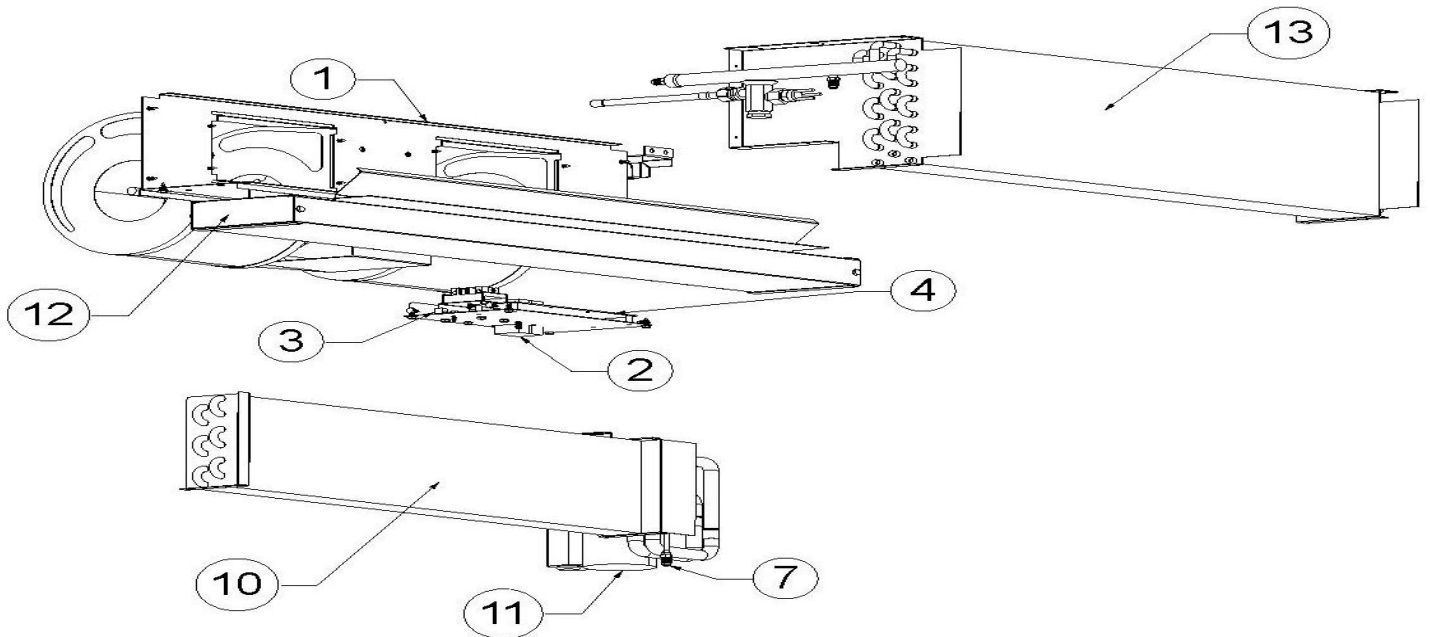


Figure 26: SDXW/ CDXW/ SCWW/ CCWW 34-35 Hydronic Heat Air Handler Unit Repair Parts Schematic W/ Constant Torque Blower Motor

SDXW/CDXW/SCWW/CCWW-34-35 HYDRONIC HEAT MODELS			
Item #	Qty.	Part #	Description
1	1	R86HM0070-42	70-1/4-115-(2)6.25X8.00-PSC Blower Assembly
1	1	R86HM0083FD	83-1/2-115-(2)7.00X9.00-Selectech Blower Assembly
2	1	R68AA0002	120-24V Transformer
3	1	R68DC0001	Ground Lug
4	1	R68AE0010	ICM AY1014 Hydronic Control Board for PSC Blower Motors
4	1	R68AE0011	ICM AY1015 Hydronic Control Board for CT Blower Motors
5	1	R68DD0005	White Wire Freeze Protector
6	1	R66AB0006	Sensor Clip HW/AH
7	1	R74BA0004	Valve - Air Bleed Body
8	1	R74BA0005	Valve - Air Bleed Core
9	1	R74BB0001	1/2" Boiler Drain
10	1	R86BC0004	2 Row Hot Water Coil 6 x 39
11	1	R78AA0007	Standard 4 GPM Circulating Pump 120V - 1/2" Inlet and Outlet
11	1	R78AA0008	Optional 7 GPM Pump 120V - 3/4" Inlet and Outlet
DRAIN PANS			
12	1	R87BAE004	Galvanized G90 Drain Pan With Coating for F.D. 42
13	DX COILS - There are too many DX coil models to list here. Contact factory sales rep to obtain the correct coil for you fan coil unit.		
CHILLED WATER COILS			
14	CHILLED WATER COILS - There are too many chilled water coil models to list here. Contact factory sales rep to obtain the correct coil for you fan coil unit.		

Table 24: SDXW/ CDXW/ SCWW/ CCWW 34-35 Hydronic Heat Air Handler Unit Repair Parts List W/ Constant Torque Blower Motor

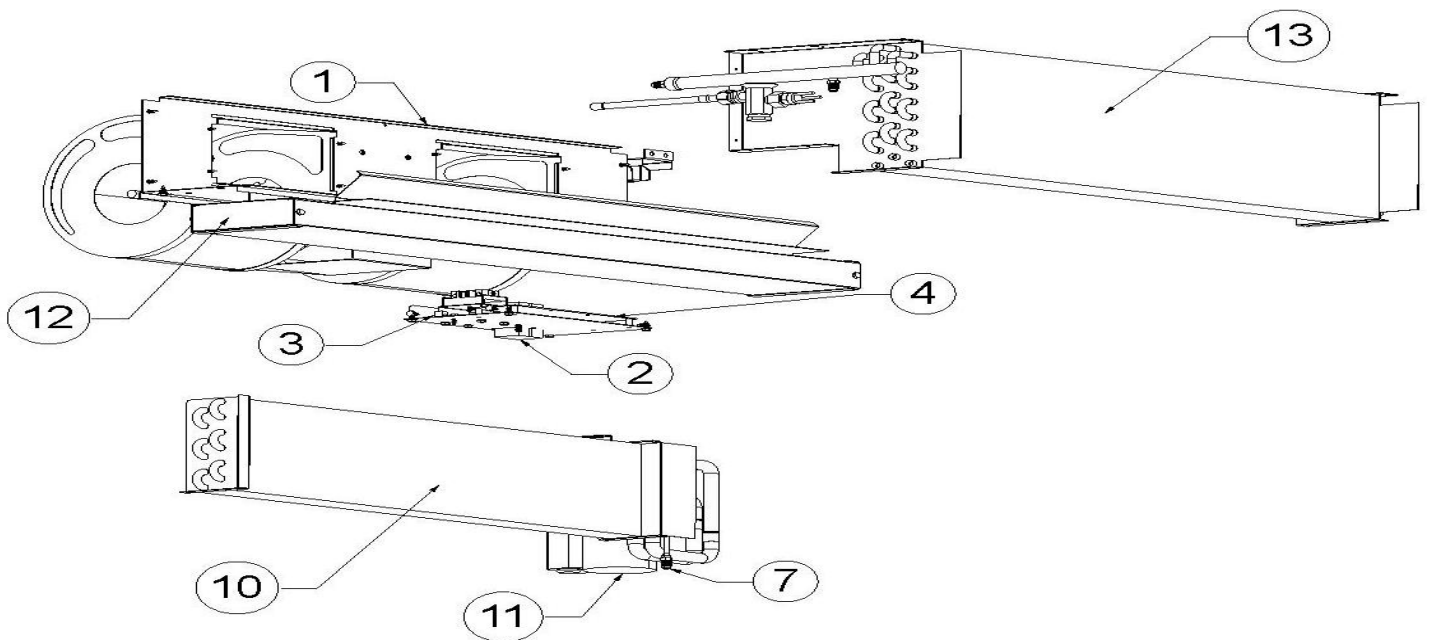


Figure 27: SDXW/ CDXW/ SCWW/ CCWW 36-37 Hydronic Heat Air Handler Unit Repair Parts Schematic W/ Constant Torque Blower Motor

SDXW/CDXW/SCWW/CCWW-36-37 HYDRONIC HEAT MODELS			
Item #	Qty.	Part #	Description
1	1	R86HM0070	70-1/4-115-(2)6.25X8.00-PSC Blower Assembly
1	1	R86HM0083FD	83-1/2-115-(2)7.00X9.00-Selectech Blower Assembly
2	1	R68AA0002	120-24V Transformer
3	1	R68DC0001	Ground Lug
4	1	R68AE0010	ICM AY1014 Hydronic Control Board for PSC Blower Motors
4	1	R68AE0011	ICM AY1015 Hydronic Control Board for CT Blower Motors
5	1	R68DD0005	White Wire Freeze Protector
6	1	R66AB0006	Sensor Clip HW/AH
7	1	R74BA0004	Valve - Air Bleed Body
8	1	R74BA0005	Valve - Air Bleed Core
9	1	R74BB0001	1/2" Boiler Drain
10	1	R86BC0003	2 Row Hot Water Coil 6 x 46
11	1	R78AA0007	Standard 4 GPM Circulating Pump 120V - 1/2" Inlet and Outlet
11	1	R78AA0008	Optional 7 GPM Pump 120V - 3/4" Inlet and Outlet
DRAIN PANS			
12	1	R87BAE003	Galvanized G90 Drain Pan With Coating for F.D. 49
13	DX COILS - There are too many DX coil models to list here. Contact factory sales rep to obtain the correct coil for you fan coil unit.		
CHILLED WATER COILS			
14	CHILLED WATER COILS - There are too many chilled water coil models to list here. Contact factory sales rep to obtain the correct coil for you fan coil unit.		

Table 25: SDXW/ CDXW/ SCWW/ CCWW 36-37 Hydronic Heat Air Handler Unit Repair Parts List W/ Constant Torque Blower Motor