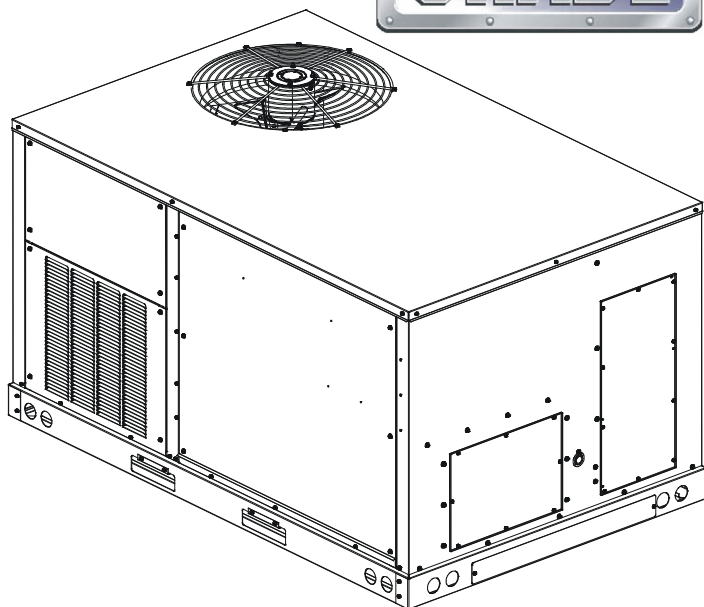




PACKAGED AIR CONDITIONER AND HEAT PUMP UNIT 3-6 Ton DIRECT DRIVE HIGH EFFICIENCY LIGHT COMMERCIAL DHC/DHH MODELS INSTALLATION INSTRUCTIONS

**WARNING**

ONLY PERSONNEL THAT HAVE BEEN TRAINED TO INSTALL, ADJUST, SERVICE, MAINTENANCE OR REPAIR (HEREINAFTER, "SERVICE") THE EQUIPMENT SPECIFIED IN THIS MANUAL SHOULD SERVICE THE EQUIPMENT.

THIS EQUIPMENT IS NOT INTENDED FOR USE BY PERSONS (INCLUDING CHILDREN) WITH REDUCED PHYSICAL, SENSORY OR MENTAL CAPABILITIES, OR LACK OF EXPERIENCE AND KNOWLEDGE, UNLESS THEY HAVE BEEN GIVEN SUPERVISION OR INSTRUCTION CONCERNING USE OF THE APPLIANCE BY A PERSON RESPONSIBLE FOR THEIR SAFETY.

CHILDREN SHOULD BE SUPERVISED TO ENSURE THAT THEY DO NOT PLAY WITH THE EQUIPMENT.

THE MANUFACTURER WILL NOT BE RESPONSIBLE FOR ANY INJURY OR PROPERTY DAMAGE ARISING FROM IMPROPER SUPERVISION, SERVICE OR SERVICE PROCEDURES. IF YOU SERVICE THIS UNIT, YOU ASSUME RESPONSIBILITY FOR ANY INJURY OR PROPERTY DAMAGE WHICH MAY RESULT. IN ADDITION, IN JURISDICTIONS THAT REQUIRE ONE OR MORE LICENSES TO SERVICE THE EQUIPMENT SPECIFIED IN THIS MANUAL, ONLY LICENSED PERSONNEL SHOULD SERVICE THE EQUIPMENT. IMPROPER SUPERVISION, INSTALLATION, ADJUSTMENT, SERVICING, MAINTENANCE OR REPAIR OF THE EQUIPMENT SPECIFIED IN THIS MANUAL, OR ATTEMPTING TO INSTALL, ADJUST, SERVICE OR REPAIR THE EQUIPMENT SPECIFIED IN THIS MANUAL WITHOUT PROPER SUPERVISION OR TRAINING MAY RESULT IN PRODUCT DAMAGE, PROPERTY DAMAGE, PERSONAL INJURY OR DEATH.

**WARNING**

DO NOT BYPASS SAFETY DEVICES.



NOTE: THIS EQUIPMENT IS ONLY APPROVED FOR USE WITH R-32 REFRIGERANT.

Our continuing commitment to quality products may mean a change in specifications without notice.

IOD-1074
08/2024

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www.daikincomfort.com



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SAFETY INSTRUCTIONS



RECOGNIZE THIS SYMBOL AS A SAFETY PRECAUTION.

These installation instructions cover the **outdoor** installation of single package heating and cooling units. See the Light Commercial Accessories Brochure for information regarding accessories.

***NOTE: PLEASE CONTACT YOUR DISTRIBUTOR OR VISIT OUR WEBSITE FOR THE LIGHT COMMERCIAL ACCESSORIES BROCHURE AND THE APPLICABLE SPECIFICATION SHEET REFERRED TO IN THIS MANUAL.**

TO THE INSTALLER

Before installing this unit, please read this manual to familiarize yourself on the specific items which must be adhered to, including maximum external static pressure to unit, air temperature rise, minimum or maximum CFM and motor speed connections.

Keep this literature in a safe place for future reference.



CAUTION

SHEET METAL PARTS, SCREWS, CLIPS AND SIMILAR ITEMS INHERENTLY HAVE SHARP EDGES, AND IT IS NECESSARY THAT THE INSTALLER AND SERVICE PERSONNEL EXERCISE CAUTION.



WARNING

DO NOT CONNECT TO OR USE ANY DEVICE THAT IS NOT DESIGN CERTIFIED BY DAIKIN FOR USE WITH THIS UNIT. SERIOUS PROPERTY DAMAGE, PERSONAL INJURY, REDUCED UNIT PERFORMANCE AND/OR HAZARDOUS CONDITIONS MAY RESULT FROM THE USE OF SUCH NON-APPROVED DEVICES.



WARNING

TO AVOID PROPERTY DAMAGE, PERSONAL INJURY OR DEATH, DO NOT USE THIS UNIT IF ANY PART HAS BEEN UNDER WATER. IMMEDIATELY CALL A QUALIFIED SERVICE TECHNICIAN TO INSPECT THE FURNACE AND TO REPLACE ANY PART OF THE CONTROL SYSTEM AND ANY GAS CONTROL HAVING BEEN UNDER WATER.



WARNING

THIS UNIT MUST NOT BE USED AS A "CONSTRUCTION HEATER" DURING THE FINISHING PHASES OF CONSTRUCTION ON A NEW STRUCTURE. THIS TYPE OF USE MAY RESULT IN PREMATURE FAILURE OF THE UNIT DUE TO EXTREMELY LOW RETURN AIR TEMPERATURE AND EXPOSURE TO CORROSIVE OR VERY DIRTY ATMOSPHERES.



WARNING

HIGH VOLTAGE!
DISCONNECT ALL POWER BEFORE SERVICING OR INSTALLING THIS UNIT. MULTIPLE POWER SOURCES MAY BE PRESENT. FAILURE TO DO SO MAY CAUSE PROPERTY DAMAGE, PERSONAL INJURY OR DEATH.



WARNING

TO PREVENT THE RISK OF PROPERTY DAMAGE, PERSONAL INJURY, OR DEATH, DO NOT STORE COMBUSTIBLE MATERIALS OR USE GASOLINE OR OTHER FLAMMABLE LIQUIDS OR VAPORS IN THE VICINITY OF THIS APPLIANCE.



WARNING

DO NOT USE MEANS TO ACCELERATE THE DEFROSTING PROCESS OR TO CLEAN, OTHER THAN THOSE RECOMMENDED BY THE MANUFACTURER. THE APPLIANCE SHALL BE STORED IN A ROOM WITHOUT CONTINUOUSLY OPERATING IGNITION SOURCES (FOR EXAMPLE: OPEN FLAMES, AN OPERATING GAS APPLIANCE OR AN OPERATING ELECTRIC HEATER). DO NOT PIERCE OR BURN. BE AWARE THAT REFRIGERANTS MAY NOT CONTAIN AN ODOR.



WARNING

ONLY AUXILIARY DEVICES APPROVED BY THE APPLIANCE MANUFACTURER OR DECLARED SUITABLE WITH THE REFRIGERANT SHALL BE INSTALLED IN CONNECTING DUCTWORK.



WARNING

AUXILIARY DEVICES WHICH MAY BE A POTENTIAL IGNITION SOURCE SHALL NOT BE INSTALLED IN THE DUCT WORK. EXAMPLES OF SUCH POTENTIAL IGNITION SOURCE ARE HOT SURFACES WITH A TEMPERATURE EXCEEDING 700°C AND ELECTRIC SWITCHING DEVICES.



WARNING

LEAK DETECTION SYSTEM INSTALLED. UNIT MUST BE POWERED EXCEPT FOR SERVICE.



WARNING

THIS UNIT IS EQUIPPED WITH ELECTRICALLY POWERED SAFETY MEASURES. TO BE EFFECTIVE, THE UNIT MUST BE ELECTRICALLY POWERED AT ALL TIMES AFTER INSTALLATION, OTHER THAN WHEN SERVICING.

REPLACEMENT PARTS

ORDERING PARTS

For shortages or damages, report to website www.goodmanmfg.com/logistics-feedback. Also, when ordering repair parts, give the complete unit model and serial numbers as stamped on the unit's nameplate.

Replacement parts for this appliance are available through your contractor or local distributor. For the location of your nearest distributor, see website **www.daikincomfort.com** or contact:

EQUIPMENT SUPPORT
DAIKIN COMFORT TECHNOLOGIES MANUFACTURING, L.P.
19001 KERMIER ROAD
WALLER, TEXAS 77484
855-770-5678

GENERAL INFORMATION



WARNING

TO PREVENT PROPERTY DAMAGE, PERSONAL INJURY OR DEATH, DUE TO FIRE, EXPLOSIONS, SMOKE, SOOT, CONDENSATION, ELECTRIC SHOCK OR CARBON MONOXIDE, THIS UNIT MUST BE PROPERLY INSTALLED, REPAIRED, OPERATED, AND MAINTAINED.

This unit is approved for outdoor installation ONLY.

Rated performance is achieved after 20 hours of operation. Rated performance is delivered at the specified airflow. See product specification sheet for light commercial models. Specification sheets can be found at www.daikincomfort.com for Daikin brand products. Within the website, please select the light commercial products menu and then select the submenu for the type of product to be installed, such as air conditioners or heat pumps, to access a list of product pages that each contain links to that model's specification sheet.

To assure that your unit operates safely and efficiently, it must be installed, operated, and maintained in accordance with these installation and operating instructions, and all local codes. In situations where these conflict, local codes take precedence.

QUALIFICATION OF WORKERS:

Personnel must be certified to service, work, and/or repair units with **FLAMMABLE REFRIGERANTS**. A certificate should document the competence and qualification achieved through training that included the substance of the following:

- Information about the explosion potential of **FLAMMABLE REFRIGERANTS** to show that flammables may be dangerous when handled without care.
- Information about **POTENTIAL IGNITION SOURCE**, especially those that are not obvious, such as lighters, light switches, vacuum cleaners, electric heaters.
- Information about the different safety concepts, including ventilated and unventilated areas.
- Information about refrigerant detectors, including function, operation, and service measures.
- Information about the concept of sealed components and sealed enclosures according to IEC 60079-15:2010.
- Information about the correct working procedures, including commissioning, maintenance, repair, decommissioning, and disposal procedures.

EPA REGULATIONS

IMPORTANT: THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (EPA) HAS ISSUED VARIOUS REGULATIONS REGARDING THE INTRODUCTION AND DISPOSAL OF REFRIGERANTS IN THIS UNIT. FAILURE TO FOLLOW THESE REGULATIONS MAY HARM THE ENVIRONMENT AND CAN LEAD TO THE IMPOSITION OF SUBSTANTIAL FINES. BECAUSE REGULATIONS MAY VARY DUE TO PASSAGE OF NEW LAWS, WE SUGGEST A CERTIFIED TECHNICIAN PERFORM ANY WORK DONE ON THIS UNIT. SHOULD YOU HAVE ANY QUESTIONS PLEASE CONTACT THE LOCAL OFFICE OF THE EPA.

NATIONAL CODES

This product is designed and manufactured to permit installation in accordance with National Codes. It is the installer's responsibility to install the product in accordance with National Codes and/or prevailing local codes and regulations.

The heating and cooling capacities of the unit should be greater than or equal to the design heating and cooling loads of the area to be conditioned. The loads should be calculated by an approved method or in accordance with ASHRAE Guide or Manual J - Load Calculations published by the Air Conditioning Contractors of America.

Obtain from:

American National Standards Institute
25 West 43rd Street, 4th Floor
New York, NY 10036

System design and installation should also, where applicable, follow information presented in accepted industry guides such as the ASHRAE Handbooks. The manufacturer assumes no responsibility for equipment installed in violation of any local codes. The mechanical installation of the packaged roof top units consists of making final connections between the unit and building services; supply and return duct connections; and drain connections (if required). The internal systems of the unit are completely factory-installed and tested prior to shipment.

Units are generally installed on a steel roof mounting curb assembly which has been shipped to the job site for installation on the roof structure prior to the arrival of the unit. The model number shown on the unit's identification plate identifies the various components of the unit such as refrigeration tonnage, heating output and voltage.

Carefully inspect the unit for damage including damage to the cabinetry. Any bolts or screws which may have loosened in transit must be re-tightened.

In the event of damage, the receiver should:

1. Make notation on delivery receipt of any visible damage to shipment or container.
2. Notify the carrier promptly and request an inspection.
3. In case of concealed damage, the carrier should be notified as soon as possible-preferably within 5 days.
4. File the claim with the following supporting documents:
 - a. Original Bill of Lading, certified copy, or indemnity bond.
 - b. Original paid freight bill or indemnity in lieu thereof.
 - c. Original invoice or certified copy thereof, showing trade and other discounts or reductions.
 - d. Copy of the inspection report issued by the carrier representative at the time damage is reported to the carrier. The carrier is responsible for making prompt inspection of damage and for a thorough investigation of each claim. The distributor or manufacturer will not accept claims from dealers for transportation damage.

NOTE: WHEN INSPECTING THE UNIT FOR TRANSPORTATION DAMAGE, REMOVE ALL PACKAGING MATERIALS. RECYCLE OR DISPOSE OF THE PACKAGING MATERIAL ACCORDING TO LOCAL CODES.

PRE-INSTALLATION CHECKS

Carefully read all instructions for the installation prior to installing unit. Ensure each step or procedure is understood and any special considerations are taken into account before starting installation. Assemble all tools, hardware and supplies needed to complete the installation. Some items may need to be purchased locally.

Check that cabling/wiring will not be subject to wear, corrosion, excessive pressure, vibration, sharp edges or any other adverse environmental effects. The check shall also take into account the effects of aging or continual vibration from sources such as compressors or fans.

Under no circumstances shall potential sources of ignition be used in the searching for or detection of refrigerant leaks. A halide torch (or any other detector using a naked flame) shall not be used.

The following leak detection methods are deemed acceptable for all refrigerant systems.

Electronic leak detectors may be used to detect refrigerant leaks but, in the case of FLAMMABLE REFRIGERANTS, the sensitivity may not be adequate, or may need recalibration. (Detection equipment shall be calibrated in a refrigerant-free area.) Ensure that the detector is not a potential source of ignition and is suitable for the refrigerant used. Leak detection equipment shall be set at a percentage of the LFL of the refrigerant and shall be calibrated to the refrigerant employed, and the appropriate percentage of gas (25 % maximum) is confirmed.

Leak detection fluids are also suitable for use with most refrigerants but the use of detergents containing chlorine shall be avoided as the chlorine may react with the refrigerant and corrode the copper pipe-work.

If a leak is suspected, all naked flames shall be removed/ extinguished.

If a leakage of refrigerant is found which requires brazing, all of the refrigerant shall be recovered from the system.

NOTE: VERIFY THAT THE VOLTAGE LISTED ON THE UNIT DATA PLATE MATCHES THE VOLTAGE SUPPLIED BY THE BUILDING UTILITIES.

UNIT LOCATION

**WARNING**

TO PREVENT POSSIBLE EQUIPMENT DAMAGE, PROPERTY DAMAGE, PERSONAL INJURY OR DEATH, THE FOLLOWING BULLET POINTS MUST BE OBSERVED WHEN INSTALLING THE UNIT.

IMPORTANT NOTE: REMOVE WOOD SHIPPING RAILS PRIOR TO INSTALLATION OF THE UNIT.

NOTE: UNITS ARE DESIGNED FOR OUTDOOR INSTALLATION ONLY AT A MAX ALTITUDE OF 8,000 FEET ABOVE SEA LEVEL

NOTE: UNITS MAY BE INSTALLED IN HEAVY SNOW CLIMATES. ENSURE NO SNOW OBSTRUCTS OR COVERS THE UNIT, AS IT MAY AFFECT PERFORMANCE. REGULARLY CHECK FOR SNOW BUILDUP.

ALL INSTALLATIONS:
IMPORTANT NOTE: UNIT SHOULD BE ENERGIZED 24 HOURS PRIOR TO COMPRESSOR START UP TO ENSURE CRANKCASE HEATER HAS SUFFICIENTLY WARMED THE COMPRESSORS. COMPRESSOR DAMAGE MAY OCCUR IF THIS STEP IS NOT FOLLOWED.

**WARNING**

THE APPLIANCE SHALL BE INSTALLED, OPERATED AND STORED IN ROOM WITH A FLOOR AREA NOT LESS THAN THE MINIMUM ROOM AREA.



$\geq 20.7 \text{ m}^2$
 222.3 ft^2

MINIMUM ROOM AREA FIGURE

IMPORTANT NOTE: REFER TO THE ALTITUDE ADJUSTED ROOM AREA CALCULATION REFERENCED LATER IN THIS MANUAL.

NOTE: APPLIANCE IS SHIPPED FROM FACTORY FOR VERTICAL DUCT APPLICATION.

Proper installation of the unit ensures trouble-free operation. Improper installation can result in problems ranging from noisy operation to property or equipment damages, dangerous conditions that could result in injury or personal property damage and that are not covered by the warranty. Give this booklet to the user and explain it's provisions. The user should retain these instructions for future reference.

- To avoid possible illness or death of the building occupants, do NOT locate outside air intake device (economizer, manual fresh air intake, motorized fresh air intake) too close to an exhaust outlet, gas vent termination, or plumbing vent outlet. For specific distances required, consult local codes.
- Allow minimum clearances from the enclosure for fire protection, proper operation, and service access (see unit clearances). These clearances must be permanently maintained.
- When the unit is heating, the temperature of the return air entering the unit must be a minimum of 55° F.

GROUND LEVEL INSTALLATIONS ONLY:

- When the unit is installed on the ground adjacent to the building, a level concrete (or equal) base is recommended. Prepare a base that is 3" larger than the package unit footprint and a minimum of 3" thick.
- The base should also be located where no runoff of water from higher ground can collect in the unit.

ROOF TOP INSTALLATIONS ONLY:

- To avoid possible property damage or personal injury, the roof must have sufficient structural strength to carry the weight of the unit(s) and snow or water loads as required by local codes. Consult a structural engineer to determine the weight capabilities of the roof.
- The unit may be installed directly on wood floors or on Class A, Class B, or Class C roof covering material.
- To avoid possible personal injury, a safe, flat surface for service personnel should be provided.
- Adequate clearances from the unit to any adjacent public walkways, adjacent buildings, building openings or openable windows must be maintained in accordance with local codes.

UNIT PRECAUTIONS

- Do not stand or walk on the unit.
- Do not drill holes anywhere in panels or in the base frame of the unit except where indicated. Unit access panels provide structural support.
- Do not remove any access panels until unit has been installed on roof curb or field supplied structure.
- Do not roll unit across finished roof without prior approval of owner or architect.
- Do not skid or slide on any surface as this may damage unit base. The unit must be stored on a flat, level surface. Protect the condenser coil because it is easily damaged.

ROOF CURB INSTALLATIONS ONLY:

Curb installations must comply with local codes and should be done in accordance with the established guidelines of the National Roofing Contractors Association.

Proper unit installation requires that the roof curb be firmly and permanently attached to the roof structure. Check for adequate fastening method prior to setting the unit on the curb.

Full perimeter roof curbs are available from the factory and are shipped unassembled. Field assembly, squaring, leveling and mounting on the roof structure are the responsibility of the installing contractor. All required hardware necessary for the assembly of the sheet metal curb is included in the curb accessory.



WARNING

TO PREVENT POSSIBLE EQUIPMENT DAMAGE, PROPERTY DAMAGE, PERSONAL INJURY OR DEATH, THE FOLLOWING BULLET POINTS MUST BE OBSERVED WHEN INSTALLING THE UNIT.

- Sufficient structural support must be determined prior to locating and mounting the curb and package unit.
- Ductwork must be constructed using industry guidelines. The duct work must be placed into the roof curb before mounting the package unit. Our full perimeter curbs include duct connection frames to be assembled with the curb. Cantilevered type curbs are not available from the factory.
- Curb insulation, cant strips, flashing and general roofing material are furnished by the contractor.
- The curbs must be supported on parallel sides by roof members.
- The roof members must not penetrate supply and return duct opening areas as damage to the unit might occur.

NOTE: THE UNIT AND CURB ACCESSORIES ARE DESIGNED TO ALLOW VERTICAL DUCT INSTALLATION BEFORE UNIT PLACEMENT. DUCT INSTALLATION AFTER UNIT PLACEMENT IS NOT RECOMMENDED.

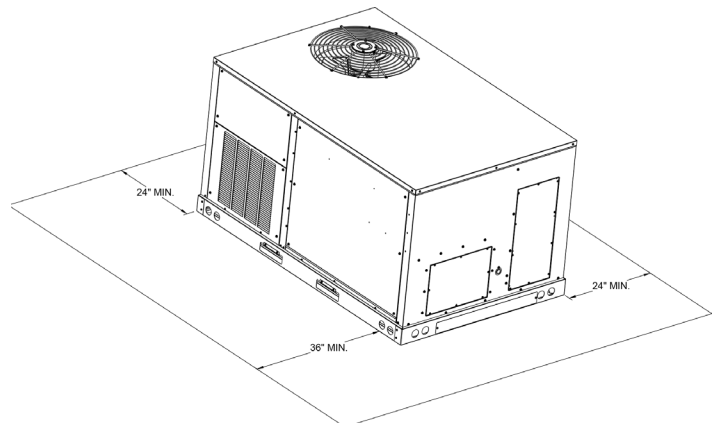


CAUTION

ALL CURBS LOOK SIMILAR. TO AVOID INCORRECT CURB POSITIONING, CHECK JOB PLANS CAREFULLY AND VERIFY MARKINGS ON CURB ASSEMBLY. INSTRUCTIONS MAY VARY IN CURB STYLES AND SUPERSEDES INFORMATION SHOWN.

See the manual shipped with the roof curb for assembly and installation instructions.

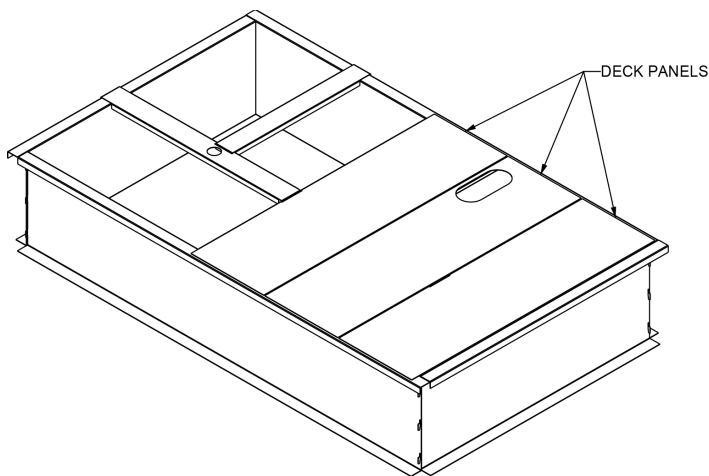
CLEARANCES



UNIT CLEARANCES

**In situations that have multiple units, a 36" minimum clearance is required between the condenser coils.*

Adequate clearance around the unit should be kept for safety, service, maintenance, and proper unit operation. A clearance of 48" is recommended on all sides of the unit to facilitate possible parts replacement, to allow service access and to insure proper ventilation and condenser airflow. The top of the unit should be completely unobstructed. If units are to be located under an overhang, there should be a minimum of 48" clearance and provisions made to deflect the warm discharge air out from the overhang. The unit should be installed remote from all building exhausts to inhibit ingestion of exhaust air into the unit fresh air intake.



ROOF CURB INSTALLATION

ROOF CURB POST-INSTALLATION CHECKS

After installation, check the top of the curb, duct connection frame and duct flanges to make sure gasket has been applied properly. Gasket should be firmly applied to the top of the curb perimeter, duct flanges and any exposed duct connection frame. If gasket is loose, re-apply using strong weather resistant adhesive.

PROTRUSION

Inspect curb to ensure that none of the utility services (electric) routed through the curb protrude above the curb.

NOTE: IF FASTENERS ARE USED TO SECURE THE DUCT WORK TO THE CURB, THESE SHOULD BE INSTALLED HORIZONTALLY INTO THE FLANGES OF THE DUCT OPENING OF THE CURB.



CAUTION

IF PROTRUSIONS EXIST, DO NOT ATTEMPT TO SET UNIT ON CURB.

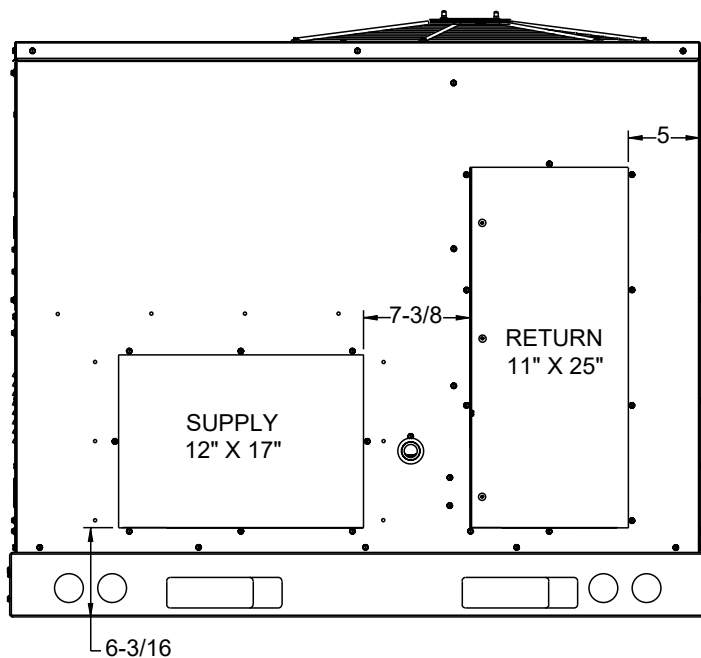
ROOF TOP DUCT CONNECTIONS

Install all duct connections on the unit before placing the unit on rooftop.

HORIZONTAL DISCHARGE

Refer to IOD-7082 included in the literature pack for installing horizontal duct covers.

Flexible duct connectors between the unit and ducts are recommended. Insulate and weatherproof all external ductwork and joints as required and in accordance with local codes.



HORIZONTAL DISCHARGE DUCT CONNECTIONS

RIGGING DETAILS



WARNING

TO PREVENT PROPERTY DAMAGE, THE UNIT SHOULD REMAIN IN AN UPRIGHT POSITION DURING ALL RIGGING AND MOVING OPERATIONS. TO FACILITATE LIFTING AND MOVING WHEN A CRANE IS USED, PLACE THE UNIT IN AN ADEQUATE CABLE SLING.



CAUTION

IF UNITS ARE LIFTED TWO AT A TIME, THE FORK HOLES ON THE CONDENSER END OF THE UNIT MUST NOT BE USED. MINIMUM FORK LENGTH IS 42" TO PREVENT DAMAGE TO THE UNIT; HOWEVER, 48" IS RECOMMENDED.

PROVISIONS FOR FORKS HAVE BEEN INCLUDED IN THE UNIT BASE FRAME. NO OTHER FORK LOCATIONS ARE APPROVED.



WARNING

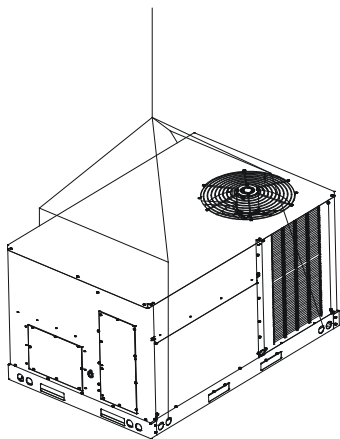
TO PREVENT POSSIBLE EQUIPMENT DAMAGE, PROPERTY DAMAGE, PERSONAL INJURY OR DEATH, THE FOLLOWING BULLET POINTS MUST BE OBSERVED WHEN INSTALLING THE UNIT.

- Unit must be lifted by the four lifting holes located at the base frame corners.
- Lifting cables should be attached to the unit with shackles.
- The distance between the crane hook and the top of the unit must not be less than 60".

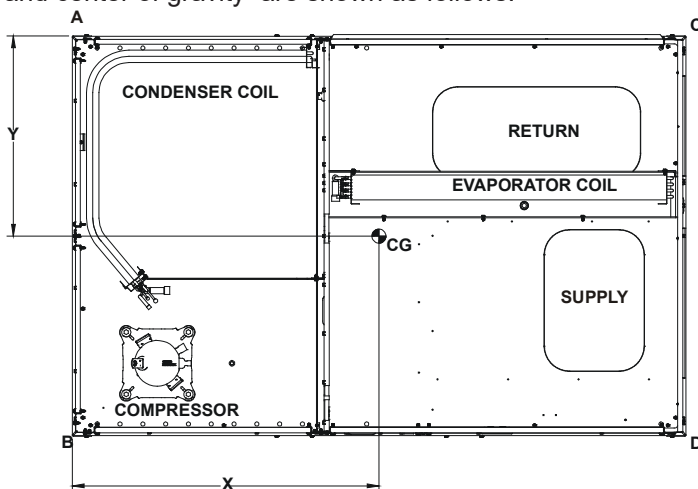
- Two spreader bars must span over the unit to prevent damage to the cabinet by the lift cables. Spreader bars must be of sufficient length so that cables do not come in contact with the unit during transport. Remove wood struts mounted beneath unit base frame before setting unit on roof curb. These struts are intended to protect unit base frame from fork lift damage. Removal is accomplished by extracting the sheet metal retainers and pulling the struts through the base of the unit. Refer to rigging label on the unit.

IMPORTANT: IF USING BOTTOM DISCHARGE WITH ROOF CURB, DUCTWORK SHOULD BE ATTACHED TO THE CURB PRIOR TO INSTALLING THE UNIT. DUCTWORK DIMENSIONS ARE SHOWN IN ROOF CURB INSTALLATION INSTRUCTIONS.

Refer to the Roof Curb Installation Instructions for proper curb installation. Curbing must be installed in compliance with the National Roofing Contractors Association Manual.



To assist in determining rigging requirements, unit weights and center of gravity are shown as follows:



CORNER AND CENTER OF GRAVITY LOCATIONS

NOTE: UNIT SHOULD BE LIFTED AT A POINT ABOVE CENTER OF GRAVITY.

Model	Shipping Weight (lb)	Operating Weight (lb)	Corner Weights (lb)				X (in)	Y (in)
			A	B	C	D		
DHC036	595	537	119	160	123	135	35.5	26.5
DHC048	648	590	150	167	113	160	34.2	26.8
DHC060	664	606	158	166	105	177	34.4	27.4
DHC072	715	657	134	149	217	157	34.4	27.0
DHH036	653	595	92	224	173	106	34.6	26.8
DHH048	679	621	166	176	112	167	33.3	26.7
DHH060	688	630	150	194	165	121	33.5	27.6
DHH072	766	708	227	162	82	237	33.3	27.2

THE NUMBERS MAY SLIGHTLY VARY DEPENDING ON INSTALLED OPTIONS.

DHC/DHH WEIGHTS TABLE



CAUTION

TO PREVENT DAMAGE TO THE WIRING, PROTECT WIRING FROM SHARP EDGES. FOLLOW NATIONAL ELECTRICAL CODE AND ALL LOCAL CODES AND ORDINANCES. DO NOT ROUTE WIRES THROUGH REMOVABLE ACCESS PANELS.



CAUTION

TO PREVENT SEVERE DAMAGE TO THE BOTTOM OF THE UNIT, DO NOT FORK LIFT UNIT AFTER WOOD STRUTS HAVE BEEN REMOVED.

Bring condenser end of unit into alignment with the curb first. Lower unit carefully onto roof mounting curb. When a rectangular cantilever curb is used, care should be taken to center the unit. Check for proper alignment and orientation of supply and return openings with duct.

RIGGING REMOVAL



CAUTION

TO PREVENT DAMAGE TO THE UNIT, DO NOT ALLOW CRANE HOOKS AND SPREADER BARS TO REST ON THE ROOF OF THE UNIT.

Remove spreader bars, lifting cables and other rigging equipment.

ELECTRICAL WIRING



WARNING

HIGH VOLTAGE!

DISCONNECT ALL POWER BEFORE SERVICING OR INSTALLING THIS UNIT. MULTIPLE POWER SOURCES MAY BE PRESENT. FAILURE TO DO SO MAY CAUSE PROPERTY DAMAGE, PERSONAL INJURY OR DEATH.





WARNING

HIGH VOLTAGE!

TO AVOID PERSONAL INJURY OR DEATH DUE TO ELECTRICAL SHOCK, DO NOT TAMPER WITH FACTORY WIRING. THE INTERNAL POWER AND CONTROL WIRING OF THESE UNITS ARE FACTORY-INSTALLED AND HAVE BEEN THOROUGHLY TESTED PRIOR TO SHIPMENT. CONTACT YOUR LOCAL REPRESENTATIVE IF ASSISTANCE IS REQUIRED.



WARNING

HIGH VOLTAGE!

PRIOR TO SERVICING THE UNIT OR REMOVING THE COMPRESSOR TERMINAL PLUG OR TERMINAL COVER, DISCONNECT ALL ELECTRICAL POWER FROM THE UNIT. MULTIPLE POWER SOURCES MAY BE PRESENT.



WARNING

DO NOT OPERATE THE COMPRESSOR(S) WITHOUT THE TERMINAL PLUG FULLY ENGAGED OR THE TERMINAL COVER PROPERLY INSTALLED. GET AWAY IF UNUSUAL SOUNDS ARE HEARD FROM WITHIN THE COMPRESSOR. DISCONNECT ELECTRICAL POWER FROM THE COMPRESSOR UNIT.



WARNING

A TRIPPED CIRCUIT BREAKER OR BLOWN FUSE MAY INDICATE THAT AN ELECTRICAL PROBLEM EXISTS. DO NOT RESET A CIRCUIT BREAKER OR REPLACE FUSES WITHOUT FIRST PERFORMING THOROUGH ELECTRICAL TROUBLESHOOTING AND TESTING PROCEDURES.



WARNING

HERMETIC COMPRESSOR ELECTRICAL TERMINAL VENTING CAN BE DANGEROUS. IN CERTAIN CIRCUMSTANCES, THE TERMINAL MAY BE EXPELLED, VENTING THE REFRIGERANT VAPOR AND COMPRESSOR OIL CONTAINED WITHIN THE COMPRESSOR HOUSING AND SYSTEM. BE ALERT FOR SOUNDS OF ARCING (SIZZLING, SPATTERING, OR POPPING) INSIDE THE COMPRESSOR. IMMEDIATELY GET AWAY IF YOU HEAR THESE SOUNDS AND DISCONNECT ELECTRICAL POWER FROM THE COMPRESSOR/UNIT.

If a terminal is damaged, electrically overloaded, or short circuits to ground, there is a remote possibility that the terminal can be suddenly expelled from the terminal housing thereby venting the refrigerant and compressor oil mixture to atmosphere.

This discharge can be ignited from electrical arcing, or other open sources of ignition, and can cause potentially severe or fatal injury. This event is known as "Terminal Venting."

To reduce the possibility of external ignition, all open flames or other heat sources must be extinguished, and all electrical power must be turned off prior to opening the terminal cover or removing the electrical plug and servicing the system.

Proper sealed system evacuation is required during servicing to maintain adequate internal system cleanliness while eliminating contaminants.

Be alert for sounds of arcing (sizzling, sputtering, or popping) inside the compressor. IMMEDIATELY GET AWAY from the unit if you hear these sounds and disconnect electrical power.

NOTE: NEVER OPERATE THE COMPRESSOR IN A VACUUM OR IN REVERSE OPERATION.



CAUTION

CONDUIT AND FITTINGS MUST BE WEATHER-TIGHT TO PREVENT WATER ENTRY INTO THE BUILDING.

For unit protection, use a fuse or HACR circuit breaker that is in excess of the circuit ampacity, but less than or equal to the maximum overcurrent protection device. DO NOT EXCEED THE MAXIMUM OVERCURRENT DEVICE SIZE SHOWN ON UNIT DATA PLATE.

All line voltage connections must be made through weatherproof fittings. All exterior power supply and ground wiring must be in approved weatherproof conduit.

The main power supply wiring to the unit and low voltage wiring to accessory controls must be done in accordance with these instructions and prevailing local electrical codes. (National Electrical Code, NFPA 70, or the Canadian Electrical Code, CSA C22.1, Part 1).

The unit is factory wired for the voltage shown on the unit's data plate. Refer to model nomenclature in Appendix B for voltage requirement for your unit.

NOTE: IF SUPPLY VOLTAGE IS 208V, LEAD ON PRIMARY OF TRANSFORMER(S) MUST BE MOVED FROM THE 230V TO THE 208V TAP. REFER TO WIRING DIAGRAM ON UNIT FOR DETAILS.

Never operate the compressor without the terminal cover secured and properly in place or without the electrical plug fully seated and engaged to the terminal posts.

Main power wiring should be sized for the minimum circuit ampacity shown on the unit's dataplate. Size wires in accordance with the ampacity tables in the prevailing local electrical codes (National Electrical Code, NFPA 70, or the Canadian Electrical Code, CSA C22.1, Part 1). If long wires are required, it may be necessary to increase the wire size to prevent excessive voltage drop. Wires should be sized for a maximum of 3% voltage drop.



CAUTION

TO AVOID RISK OF PROPERTY DAMAGE, PERSONAL INJURY OR FIRE, USE ONLY COPPER CONDUCTORS.



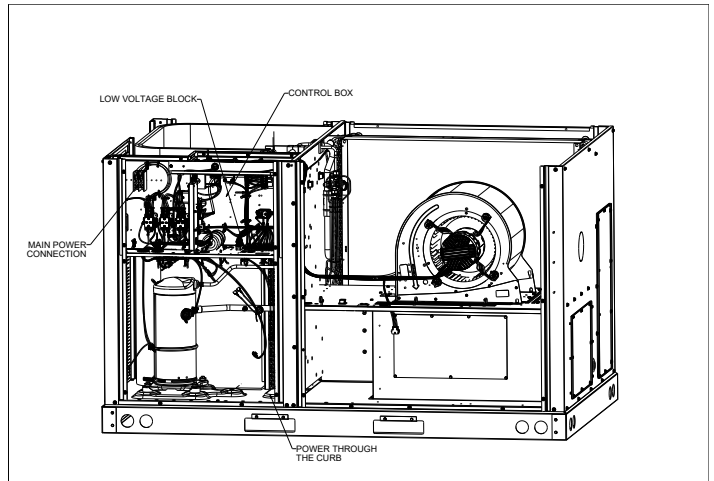
CAUTION

LABEL ALL WIRES PRIOR TO DISCONNECTION WHEN SERVICING CONTROLS. WIRING ERRORS CAN CAUSE IMPROPER AND DANGEROUS OPERATION. VERIFY PROPER OPERATION AFTER SERVICING.

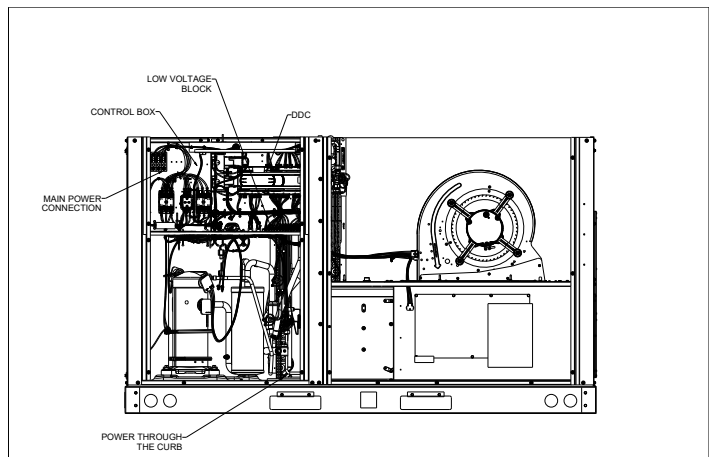
NOTE: A WEATHER-TIGHT DISCONNECT SWITCH, PROPERLY SIZED FOR THE UNIT TOTAL LOAD, MUST BE FIELD OR FACTORY INSTALLED. AN EXTERNAL FIELD SUPPLIED DISCONNECT MAY BE MOUNTED ON THE EXTERIOR PANEL. SWITCH SHALL BE PROVIDED TO ENSURE ALL-POLE DISCONNECTION FROM THE SUPPLY MAINS.

Ensure the data plate is not covered by the field-supplied disconnect switch.

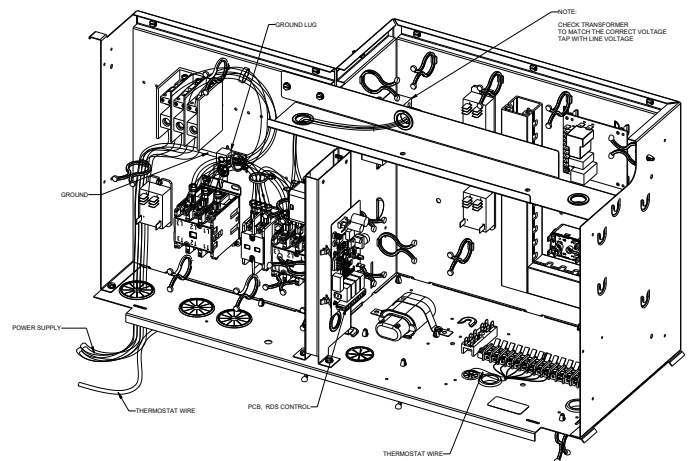
- Some disconnect switches are not fused. Protect the power leads at the point of distribution in accordance with the unit data plate.
- The unit must be electrically grounded in accordance with prevailing local electrical codes (National Electrical Code, NFPA 70, or the Canadian Electrical Code, CSA C22.1, Part 1). A ground lug is provided for this purpose. Do not use the ground lug for connecting a neutral conductor.
- Connect power wiring to the electrical power block, ground wire to ground lug, and thermostat wiring to terminal block (where applicable) within the main control box.



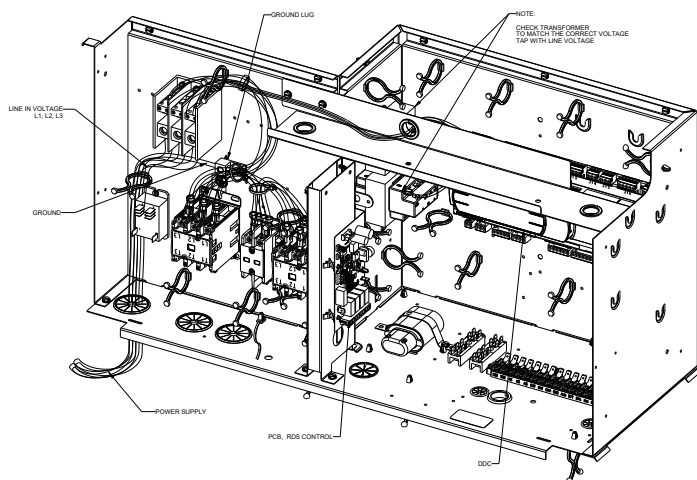
HP/AC UNIT



HP/AC DDC UNIT



HP/AC Control Box



HP/AC DDC CONTROL BOX

NOTE: COMPONENTS MAY VARY DEPENDING ON UNIT CONFIGURATION.



WARNING

FAILURE OF UNIT DUE TO OPERATION ON IMPROPER LINE VOLTAGE OR WITH EXCESSIVE PHASE UNBALANCE CONSTITUTES PRODUCT ABUSE AND IS NOT COVERED BY THE WARRANTY AND MAY CAUSE SEVERE DAMAGE TO THE UNIT ELECTRICAL COMPONENTS.

AREAS WITHOUT CONVENIENCE OUTLET

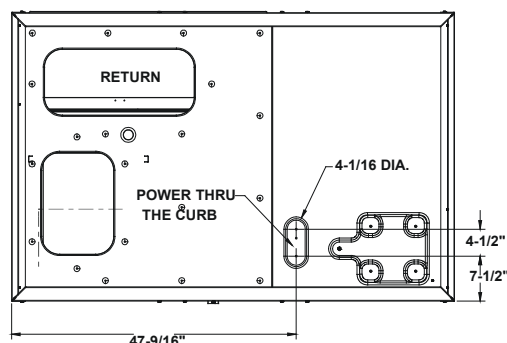
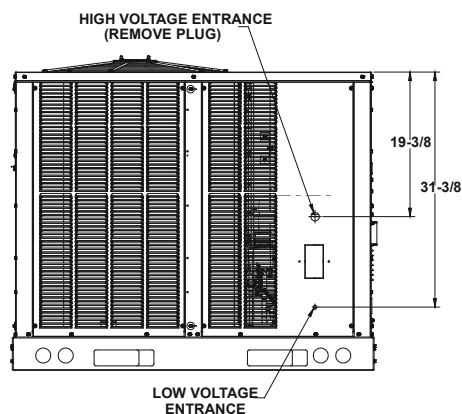
It is recommended that an independent 115V power source be brought to the vicinity of the roof top unit for portable lights and tools used by the service mechanic.

NOTE: REFER TO LOCAL CODES FOR REQUIREMENTS. THESE OUTLETS CAN ALSO BE FACTORY INSTALLED.

UNITS INSTALLED ON ROOF TOPS

Main power and low voltage wiring may enter the unit through the condenser end of unit or through the roof curb. Install conduit connectors at the designated locations. External connectors must be weatherproof. All holes in the unit base must be sealed (including those around conduit nuts) to prevent water leakage into building. All required conduit and fittings are to be field supplied.

Supply voltage to roof top unit must not vary by more than 10% of the value indicated on the unit data plate. Phase voltage unbalance must not exceed 2%. Contact your local power company for correction of improper voltage or phase unbalance.



ELECTRICAL ENTRANCE AND THRU CURB (BOTTOM VIEW OF UNIT)

LOW VOLTAGE CONTROL WIRING

1. A 24V thermostat must be installed for unit operation UNLESS THE DDC CONTROLS OPTION HAS BEEN INSTALLED. (REFER TO DDC QUICKSTART GUIDE)
2. Locate thermostat or remote sensor in the conditioned space where it will sense average temperature. Do not locate the device where it may be directly exposed to supply air, sunlight or other sources of heat. Follow installation instructions packaged with the installed device.
3. Use #18 AWG wire for 24V control wiring runs not exceeding 75 feet. Use #16 AWG wire for 24V control wiring runs not exceeding 125 feet. Use #14 AWG wire for 24V control wiring runs not exceeding 200 feet. Low voltage wiring may be National Electrical Code (NEC) Class 2 where permitted by local codes.
4. Route the low voltage control wires from sub-base terminals to the unit. Control wiring should enter through the condenser panel opening or through curb indicated in "Electrical Entrance" figure. Connect thermostat and any accessory wiring to low voltage terminal block TB1 in the main control box.

NOTE: FIELD-SUPPLIED CONDUIT MAY NEED TO BE INSTALLED DEPENDING ON UNIT/CURB CONFIGURATION. USE #18 AWG SOLID CONDUCTOR WIRE WHENEVER CONNECTING THERMOSTAT WIRES TO TERMINALS ON SUB-BASE. DO NOT USE LARGER THAN #18 AWG WIRE. A TRANSITION TO #18 AWG WIRE MAY BE REQUIRED BEFORE ENTERING THERMOSTAT SUB-BASE.

NOTE: REFER TO UNIT WIRING DIAGRAMS FOR THERMOSTAT OR REMOTE SENSOR CONNECTIONS.

CIRCULATING AIR AND FILTERS

DUCTWORK

The supply duct from the unit through a wall may be installed without clearance. However, minimum unit clearances must be maintained (see "Clearances" section). The supply duct should be provided with an access panel large enough to inspect the air chamber downstream of the heat exchanger. A cover should be tightly attached to prevent air leaks. False ceilings or drop ceilings may be used as a return air plenum.

NOTE: ADEQUATE RETURN GRILLS HAVE TO BE SUPPLIED FOR EACH ROOM FOR PROPER RETURN FOR THAT SPACE.

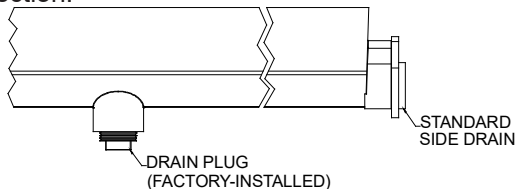
Ductwork dimensions are shown in the roof curb installation manual.

If desired, supply and return duct connections to the unit may be made with flexible connections to reduce possible unit operating sound transmission.

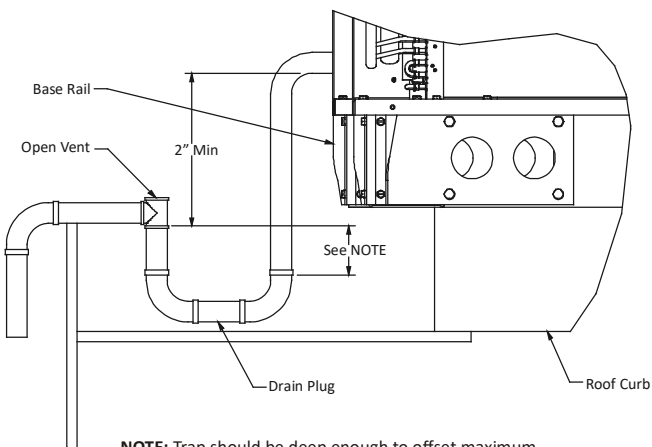
CONDENSATE DRAIN CONNECTION

CONDENSATE DRAIN CONNECTION

A 3/4" female NPT drain connection is supplied on the end of the unit and bottom of the drain pan for condensate piping. An external trap must be installed for proper condensate drainage. Hand tighten drain fitting to the drain connection.



Drain Pan (Side View)



NOTE: Trap should be deep enough to offset maximum unit static difference. A minimum 4" trap is recommended.

DRAIN CONNECTION

Install condensate drain trap as shown. Use 3/4" drain line and fittings or larger. Do not operate without trap.

NOTE: ALL THREADED CONNECTIONS SHOULD BE SEALED WITH THREAD SEALER TO PREVENT LEAKS.

HORIZONTAL DRAIN

Drainage of condensate directly onto the roof may be acceptable; refer to local code. It is recommended that a small drip pad of either stone, mortar, wood or metal be provided to prevent any possible damage to the roof.

VERTICAL DRAIN

To use the bottom drain connection, remove the drain plug from the bottom connection and install it in the horizontal connection.

CLEANING

Due to the fact that drain pans in any air conditioning unit will have some moisture in them, algae and fungus will grow due to airborne bacteria and spores. Periodic cleaning is necessary to prevent this build-up from plugging the drain.

STARTUP, ADJUSTMENTS, AND CHECKS



WARNING

HIGH VOLTAGE!

TO AVOID PERSONAL INJURY OR DEATH DUE TO ELECTRICAL SHOCK, BOND THE FRAME OF THIS UNIT TO THE BUILDING ELECTRICAL GROUND BY USE OF THE GROUNDING TERMINAL PROVIDED OR OTHER ACCEPTABLE MEANS. DISCONNECT ALL POWER BEFORE SERVICING OR INSTALLING THIS UNIT.



CAUTION

TO PREVENT PROPERTY DAMAGE OR PERSONAL INJURY, DO NOT START THE UNIT UNTIL ALL NECESSARY PRE-CHECKS AND TESTS HAVE BEEN PERFORMED.



WARNING

MOVING MACHINERY HAZARD!

TO PREVENT POSSIBLE PERSONAL INJURY OR DEATH, DISCONNECT POWER TO THE UNIT AND PADLOCK IN THE "OFF" POSITION BEFORE SERVICING FANS.

NOTE: BLOWER MOTOR ROTATION CAN NOT BE USED TO DETERMINE PROPER PHASING OF THE UNIT.

Place manifold gage sets on the compressor suction and discharge lines and observe pressures. Suction pressure should drop and discharge pressure should increase. If this is not observed, disconnect electrical power to the unit, lock/tag-out, and swap line voltages L1 and L2.

PRE-STARTUP INSTRUCTIONS

On new installations, or if a major component has been replaced, the operation of the unit must be checked.

Check unit operation as outlined in the following instructions. If any sparking, odors, or unusual sounds are encountered, shut off electrical power and recheck for wiring errors, or obstructions in or near the blower motors.

If horizontal duct is installed, duct covers must be removed before operating unit.

The Startup, Adjustments, and Checks procedure provides a step-by-step sequence which, if followed, will assure the proper startup of the equipment in the minimum amount of time. Air balancing of duct system is not considered part of this procedure. However, it is an important phase of any air conditioning system startup and should be performed upon completion of the Startup, Adjustments, and Checks procedure. The Startup, Adjustments, and Checks procedure at outside ambients below 55°F should be limited to a readiness check of the refrigeration system with the required final check and calibration left to be completed when the outside ambient rises above 55°F.

TEMPORARY HEATING OR COOLING

If the unit is to be used for temporary heating or cooling, a "Startup, Adjustments, and Checks" must first be performed in accordance with this manual. Damage or repairs due to failure to comply with these requirements are not covered under the warranty. **After** the machines are used for temporary heating or cooling, inspect the coils, fans, and motors for unacceptable levels of construction dust and dirt and install new filters.

CONTRACTOR RESPONSIBILITY

The installing contractor must be certain that:

- All supply and return air ductwork is in place, properly sealed, and corresponds with installation instructions.
- All thermostats and sensors are mounted and wired in accordance with installation instructions.
- All electric power, all gas, and the condensate drain installation have been made to each unit on the job. These main supply lines must be functional and capable of operating all units simultaneously.
- All filters are in place.

ROOF CURB INSTALLATION CHECK

Inspect the roof curb for correct installation. The unit and curb assembly should be level. Inspect the flashing of the roof mounting curb to the roof, especially at the corners, for good workmanship. Also check for leaks around gaskets. Note any deficiencies in a separate report and forward to the contractor.

OBSTRUCTIONS, FAN CLEARANCE AND WIRING

Remove any extraneous construction and shipping materials that may be found during this procedure. Rotate all fans manually to check for proper clearances and that they rotate freely. Check for bolts and screws that may have jarred loose during shipment to the job site. Re-tighten if necessary. Re-tighten all electrical connections.

FIELD DUCT CONNECTIONS

Verify that all duct connections are tight and that there is no air bypass between supply and return.

FILTER SECTION CHECK

Remove filter section access panels and check that filters are properly installed. Note airflow arrows on filter frames.

PRE-STARTUP PRECAUTIONS

It is important to your safety that the unit has been properly grounded during installation. Check ground lug connection in main control box for tightness prior to closing circuit breaker or disconnect switch. Verify that supply voltage on line side of disconnect agrees with voltage on unit identification plate and is within the utilization voltage range as indicated in Appendix B Electrical Data.

System Voltage - That nominal voltage value assigned to a circuit or system for the purpose of designating its voltage class.

Nameplate Voltage - That voltage assigned to a piece of equipment for the purpose of designating its voltage class and for the purpose of defining the minimum and maximum voltage at which the equipment will operate.

Utilization Voltage - The voltage of the line terminals of the equipment at which the equipment must give fully satisfactory performance. Once it is established that supply voltage will be maintained within the utilization range under all system conditions, check and calculate if an unbalanced condition exists between phases. Calculate percent voltage unbalance as follows:

Three Phase Models Only

$$\text{3) PERCENT VOLTAGE UNBALANCE} = 100 \times \frac{\text{2) MAXIMUM VOLTAGE DEVIATIONS FROM AVERAGE VOLTAGE}}{\text{1) AVERAGE VOLTAGE}}$$

HOW TO USE THE FORMULA:

EXAMPLE: With voltage of 220, 216, and 213

1) Average Voltage = $220+216+213 \div 3 = 216$

2) Maximum Voltage Deviations from Average Voltage = $220 - 216 = 4$

3) Percent Voltage Unbalance = $100 \times \frac{4}{216} = \frac{400}{216} = 1.8\%$

Percent voltage unbalance MUST NOT exceed 2%.

AIR FLOW ADJUSTMENTS

When the final adjustments are complete, the current draw of the motor should be checked and compared to the full load current rating of the motor. The amperage must not exceed the service factor stamped on the motor nameplate.

If an economizer is installed, check the unit operating balance with the economizer at full outside air and at minimum outside air.

High stage airflow setting to be between 300 and 500 CFM per ton, see Table below. For models with electric heat the total airflow must not be less than that required for operation of the electric heaters. See Appendix D for minimum airflow for specific electric heaters.

NOTE: NEVER RUN CFM BELOW 300 CFM PER TON, EVAPORATOR FREEZING OR POOR UNIT PERFORMANCE IS POSSIBLE.

Changing Speed Taps

Adjust the CFM for the unit by changing the position of the low voltage leads on the terminal block TB1. Refer to Appendix A for blower performance at each speed tap. The below tables show the allowable speed taps and the factory locations.

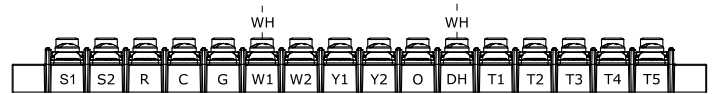
NOTE: X* DENOTES FACTORY SPEED TAP LOCATION. IF MORE THAN ONE LEAD IS ENERGIZED SIMULTANEOUSLY, THE MOTOR WILL RUN AT THE HIGHER TAP. FOR PROPER OPERATION, PU CANNOT SHARE A TAP WITH YL, BR CANNOT SHARE A TAP WITH WH, AND PU/BR SHOULD HAVE HIGHER SPEED SETTINGS THAN YL/WH, RESPECTIVELY.

ALLOWABLE SPEED TAPS 3-6 TON STD STATIC AC					
ID MOTOR TAPS	T1	T2	T3	T4	T5
FAN (BK)	X*	-	-	-	-
COOLING STG 1 (YL)	X*	X	X	X	X
COOLING STG 2 (PU)	-	X	X*	X	X
E-HEAT STG 1 (WH)	-	X*	X	X	X
E-HEAT STG 2 (BR)	-	X	X*	X	X

ALLOWABLE SPEED TAPS 3-6 TON STD STATIC HP					
ID MOTOR TAPS	T1	T2	T3	T4	T5
FAN (GR)	X*	-	-	-	-
COOLING/HEATING STG 1 (YL)	X*	X	X	X	X
COOLING/HEATING STG 2 (PU)	-	X	X*	X	X
E-HEAT STG 1 (WH)	-	X*	X	X	X
E-HEAT STG 2 (BR)	-	X	X*	X	X

NOTE: FOR MOTORS WITH 10 SPEED TAPS, DH = 0VAC USES SPEED TAPS T1-T5 (FOR COOLING) AND DH = 24VAC USES T1'-T5' (FOR E-HEAT). IN E-HEAT MODE, W1 AUTOMATICALLY ENERGIZES DH.

W1 NOT ENERGIZED = DH NOT ENERGIZED (T1-T5 ACTIVE)



W1 ENERGIZED = DH ENERGIZED (T1'-T5' ACTIVE)



ALLOWABLE SPEED TAPS 3-6 TON HIGH STATIC AC										
ID MOTOR TAPS	T1	T2	T3	T4	T5	T1'	T2'	T3'	T4'	T5'
FAN (BK)	X*	-	-	-	-	X	-	-	-	-
COOLING STG 1 (YL)	X*	X	X	X	X	-	-	-	-	-
COOLING STG 2 (PU)	-	X	X*	X	X	-	-	-	-	-
E-HEAT STG 1 (WH)	-	-	-	-	-	X*	X	X	X	X
E-HEAT STG 2 (BR)	-	-	-	-	-	-	X	X*	X	X

ALLOWABLE SPEED TAPS 3-6 TON HIGH STATIC HP										
ID MOTOR TAPS	T1	T2	T3	T4	T5	T1'	T2'	T3'	T4'	T5'
FAN (GR)	X*	-	-	-	-	X	-	-	-	-
COOLING/HEATING STG 1 (YL)	X*	X	X	X	X	-	-	-	-	-
COOLING/HEATING STG 2 (PU)	-	X	X*	X	X	-	X	X	X	X
E-HEAT STG 1 (WH)	-	-	-	-	-	X*	X	X	X	X
E-HEAT STG 2 (BR)	-	-	-	-	-	-	X	X*	X	X

NOTE: ON UNITS WITH DDC CONTROLS INSTALLED, REFER TO THE DDC USER MANUAL FOR DETAILS ON MAKING AIRFLOW ADJUSTMENTS. INDIVIDUAL SETTINGS ARE AVAILABLE FOR FAN ONLY, LOW STAGE COOLING, HIGH STAGE COOLING, LOW STAGE HEATING, AND HIGH STAGE HEATING WHICH CAN BE ADJUSTED AS NEEDED TO MEET AIRFLOW REQUIREMENTS.

CHECKING SUBCOOLING

**SUBCOOLING = SAT LIQUID LINE TEMP
- LIQUID LINE TEMP**

EXAMPLE:

- Liquid Line Pressure = 417 PSI
- Corresponding Temp. = 120°F
- Thermometer on Liquid line = 109°F.

To obtain the amount of subcooling, subtract 109°F from 120°F. The difference is 11° subcooling. The appropriate range for each model is available in the Unit Subcooling and Superheat table.

NOTE: UNITS WITH A TXV SHOULD BE CHARGED TO SUBCOOLING ONLY. MAKE SURE THE AIR FLOW IS CORRECT BEFORE MAKING ANY ADJUSTMENTS.

CHECKING SUPERHEAT

**SUPERHEAT = SUCTION LINE TEMP
- SAT SUCTION LINE TEMP**

EXAMPLE:

- Suction Pressure = 143 PSI
- Corresponding Temp. = 50°F
- Thermometer on Suction Line = 59°F

To obtain the amount of superheat, subtract 50.0 from 59.0°F. The difference is 9° Superheat. The appropriate range for each model is available in the Unit Subcooling and Superheat table.

TXV SUPERHEAT ADJUSTMENT

NOTE: SUPERHEAT ADJUSTMENTS SHOULD NOT BE MADE UNTIL INDOOR AMBIENT CONDITIONS HAVE STABILIZED AND CORRECT AIR FLOW (CFM) HAS BEEN VERIFIED. THIS COULD TAKE UP TO 24 HOURS DEPENDING ON INDOOR TEMPERATURE AND HUMIDITY. BEFORE CHECKING SUPERHEAT, RUN THE UNIT IN COOLING FOR 15-20 MINUTES OR UNTIL REFRIGERANT PRESSURE STABILIZES.

Unscrew the cover from the expansion valve, locate the adjustment screw, and turn it clockwise (in) to increase superheat or counterclockwise (out) to decrease superheat. It is recommended to make small adjustments at a time, 1/8-1/4 turn increments. Replace adjustment cap. Wait a minimum of 15 minutes between adjustments to allow time for the TXV and pressures to stabilize.

REFRIGERANT CHARGE CHECK

NOTE: FOR OPTIMAL PERFORMANCE, FOLLOW CHARGING INSTRUCTIONS BELOW.

UNITS WITH TXV

Single Stage Cooling Application: Refer to the Unit Sub-Cooling and Superheat table.

Two-Stage Cooling Application: Run unit on Low Stage cooling and refer to Unit SubCooling and Superheat table.

1. Purge gauge lines. Connect service gauge manifold to access fittings. Run system at least 15 minutes to allow pressure to stabilize.
2. Temporarily install thermometer on liquid (small) line near liquid line access fitting with adequate contact and insulate for best possible reading.
3. Check subcooling and superheat. System should have a subcooling and superheat within the range listed on the Design Superheat and Subcooling table.
 - a. If subcooling and superheat are low, adjust TXV superheat, then check subcooling.
NOTE: To adjust superheat, turn the valve stem clockwise to increase and counterclockwise to decrease. Refer to TXV Superheat Adjustment referenced in this manual.
 - b. If subcooling is low and superheat is high, add charge to raise subcooling then check superheat.
 - c. If subcooling and superheat are high, adjust TXV valve superheat, then check subcooling.
 - d. If subcooling is high and superheat is low, adjust TXV valve superheat and remove charge to lower the subcooling.

NOTE: Do NOT adjust the charge based on suction pressure unless there is a gross undercharge. If an under charge is suspected, recover the charge, re-evacuate the system, and recharge per data plate. No adjustments should be made if suspecting a charge issue.

4. Disconnect manifold set, installation is complete.

Design Superheat & Subcooling					
Model	Superheat (°F)	Subcooling (°F)	Expansion Device	Cooling Stage	Outdoor Ambient
DHC036	15-17	2-4	TXV	Low	82
DHC048	16-17	2-4	TXV	Low	82
DHC060	14-17	5-7	TXV	Low	82
DHC072	14-18	7-11	TXV	Low	82
DHH036	13-15	1-3	TXV	Low	82
DHH048	16-18	1-3	TXV	Low	82
DHH060	16-17	4-6	TXV	Low	82
DHH072	12-16	7-11	TXV	Low	82

REFRIGERATION SYSTEM CHECKS

This unit is equipped with thermal expansion valves. Ensure the hold-down bolts on the compressor are secure and have not vibrated loose during shipment. Check that the vibration grommets have been installed and visually check all piping for damage and leaks and repair if necessary. The entire system has been factory charged and tested, making it unnecessary to field charge. Factory refrigerant charge is shown on the unit's nameplate. To confirm charge levels or, if a leak occurs and charge needs to be added to the system, it is recommended to evacuate the system and recharge refrigerant to the unit's nameplate specifications. This unit has been rated in the cooling mode at the AHRI rated conditions of: indoor (80°F db/67°F wb) and outdoor (95°F db). While operating at this condition, the superheat should range from 9°F to 11°F for each refrigeration circuit measured at the suction service port located near the compressor.

START-UP PROCEDURE AND CHECKLIST

Begin with power turned off at all disconnects.

AIR CONDITIONING START-UP PROCEDURE

1. Ensure the thermostat is set to OFF and Fan is set to Auto. On units with DDC controls installed, use Test/Balance Menu to force the unit to Vent Mode. This test bypasses internal delays.
2. Inspect all registers and set them to the normal open position.
3. Turn on the electrical supply at the disconnect.
4. Turn the fan switch to the "ON" position. The blower should operate at the selected speed. On units with DDC controls installed, use Test/Balance Menu to force the unit to Vent Mode. This test bypasses internal delays.

5. Turn the fan switch to "Auto" position. The blower should stop after a 60 second delay. On units with DDC controls installed, use Test/Balance Menu to force the unit to Off Mode. This test bypasses internal delays.
6. Set the thermostat to Cool mode and slowly lower the cooling temperature until the unit starts. The compressor, blower and fan should now be operating. Allow the unit to run 10 minutes, make sure cool air is being supplied by the unit. On units with DDC controls installed, use Test/Balance Menu to force the unit to Low Cool Mode or High Cool Mode. This test bypasses internal delays.
7. Check that the compressor is operating correctly. The scroll compressors in these units **MUST** operate in the proper rotation. To ensure the compressors are operating in the correct direction, check the compressor discharge line pressure or temperature after the compressor is started. The discharge pressure and discharge line temperature should increase. If this does not occur and the compressor is producing an exceptional amount of noise, this indicates that there is a phasing issue. Perform the following to correct:
 1. Turn power to the unit OFF.
 2. Switch any two leads of power supply at unit Single Point Power Block.
 3. Turn power to the unit ON.
 4. Perform step 7 again.
8. Turn the temperature setting to the highest position, stopping the unit. The indoor blower will continue to run for 60 seconds.
9. Turn the thermostat system switch to "OFF" and disconnect all power when servicing the unit. On units with DDC controls installed, use Test/Balance Menu to force the unit to Vent Mode. This test bypasses internal delays. Use Test/Balance Menu to disable Force Mode operation and allow the unit to return to normal operation.

NOTE: THE COMPRESSOR HAS A 180 SECOND RE-START DELAY ON TIMER TO AVOID SHORT CYCLING.



WARNING

HIGH VOLTAGE!

DISCONNECT ALL POWER BEFORE SERVICING OR INSTALLING THIS UNIT. MULTIPLE POWER SOURCES MAY BE PRESENT. FAILURE TO DO SO MAY CAUSE PROPERTY DAMAGE, PERSONAL INJURY OR DEATH.



HEAT PUMP START-UP PROCEDURE

1. Check the cooling mode for the heat pump in the same manner as above. The reversing valve is energized when the thermostat is placed in the cooling position. A clicking sound should be noticeable from the reversing valve. By lowering the temperature setting to call for cooling, the solenoid valve is energized. The compressor, blower and fan should then be running. After the cooling mode is checked out, turn the thermostat system switch to "OFF". On units with DDC controls installed, use Test/Balance Menu to force the unit to Off Mode. This test bypasses internal delays.
2. Turn the thermostat system switch to "HEAT" and fan switch to "AUTO". On units with DDC controls installed, use Test/Balance Menu to force the unit to Low Heat or High Heat Mode. This test bypasses internal delays.
3. Slowly raise the heating temperature setting. When the heating first stage makes contact, stop raising the temperature setting. The compressor, blower and fan should now be running with the reversing valve in the deenergized (heating) position. After giving the unit time to settle out, make sure the unit is supplying heated air.

NOTE: IF THE OUTDOOR AMBIENT IS ABOVE 80°F, THE UNIT MAY TRIP ON ITS HIGH PRESSURE CUT OUT WHEN ON HEATING. THE COMPRESSOR SHOULD STOP. THE HEATING CYCLE MUST BE THOROUGHLY CHECKED, SO POSTPONE THE TEST TO ANOTHER DAY WHEN CONDITIONS ARE MORE SUITABLE BUT-DO NOT FAIL TO TEST. IF THE OUTDOOR AMBIENT IS LOW AND THE UNIT OPERATES PROPERLY ON THE HEATING CYCLE, YOU MAY CHECK THE PRESSURE CUTOFF OPERATION BY BLOCKING OFF THE INDOOR RETURN AIR UNTIL THE UNIT TRIPS.

4. Once the heating has been confirmed, raise the temperature setting until the second stage heating makes contact. Supplemental resistance heat, if installed should now come on. Make sure it operates properly.
5. For thermostats with emergency heat switch, set thermostat to Emergency Heat mode. The heat pump will stop, the blower will continue to run, all heaters will come on and the thermostat emergency heat light will come on. Confirm heaters operate normally. On units with DDC controls installed, use Test/Balance Menu to disable Force Mode operation and allow the unit to return to normal operation.

FINAL SYSTEM CHECKS

1. Check to see if all supply and return air grilles are adjusted and the air distribution system is balanced for the best compromise between heating and cooling.
2. Check for air leaks in the ductwork. See Sections on Air Flow Adjustments.
3. Make sure the unit is free of “rattles”, and the tubing in the unit is free from excessive vibration. Also make sure tubes or lines and wires are not rubbing against each other or sheet metal surfaces or edges. If so, correct the trouble.
4. Set the thermostat at the appropriate setting for cooling and heating or automatic changeover for normal use.
5. Be sure the Owner is instructed on the unit operation, filter, servicing, correct thermostat operation, etc.

REFRIGERATION PERFORMANCE CHECK

Check that compressor RLA corresponds to values shown in Appendix B. RLA draw can be much lower than values listed at low load conditions and low ambient condensing temperatures. Values in Appendix B may be slightly exceeded at high load conditions and high ambient condensing temperatures.

HEAT PUMP OPERATION

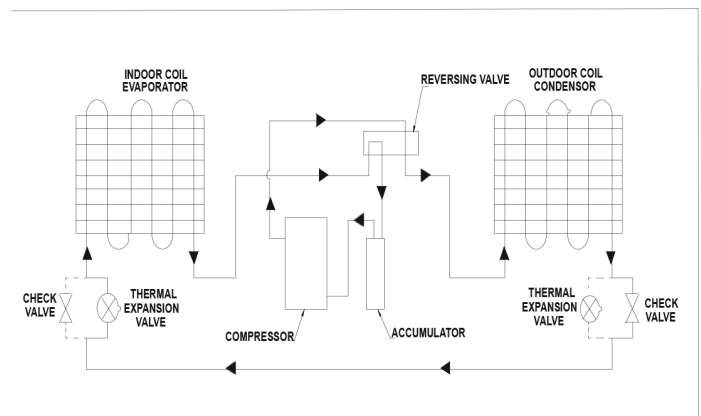
COOLING CYCLE

When the heat pump is in the cooling cycle, it operates exactly as a Summer Air Conditioner unit. In this mode, all the charts and data for service that apply to summer air conditioning apply to the heat pump. Most apply on the heating cycle except the “condenser” becomes the “evaporator”, “evaporator” becomes “condenser”, “cooling” becomes “heating”.

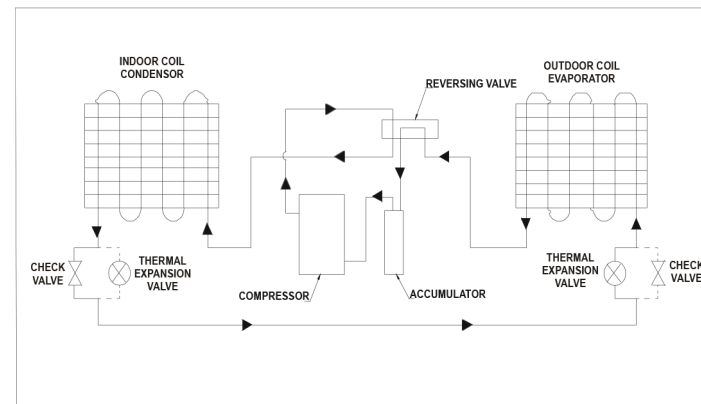
HEATING CYCLE

The heat pump switches from cooling cycle by redirecting refrigerant flow through the refrigerant circuit external to the compressor. This is accomplished by the reversing valve. Hot discharge vapor from the compressor is directed to the indoor coil (evaporator on the cooling cycle) where the heat is removed, and the vapor condenses to liquid. It then goes through the expansion device to the outdoor coil (condenser on the cooling cycle) where the liquid is evaporated, and the vapor goes to the compressor.

The following figures show a schematic of a heat pump on the cooling cycle and the heating cycle. The heat pump is equipped with thermal expansion valves for the indoor and outdoor coils. It is also provided with a defrost control system.



COOLING



HEATING

HEATING

When the heat pump is on the heating cycle, the outdoor coil is functioning as an evaporator. The temperature of the refrigerant in the outdoor coil must be below the temperature of the outdoor air in order to extract heat from the air. Thus, the greater the difference in the outdoor temperature and the outdoor coil temperature, the greater the heating capacity of the heat pump. This phenomenon is a characteristic of a heat pump. It is a good practice to provide supplementary heat for all heat pump installations in areas where the temperature drops below 45° F. It is also a good practice to provide sufficient supplementary heat to handle the entire heating requirement should there be a component failure of the heat pump, such as a compressor, or refrigerant leak, etc.

Since the temperature of the refrigerant in the outdoor coil on the heating cycle is generally below freezing point, frost forms on the surfaces of the outdoor coil under certain weather conditions of temperature and relative humidity. Therefore, it is necessary to reverse the flow of the refrigerant to provide hot gas in the outdoor coil to melt the frost accumulation. This is accomplished by reversing the heat pump to the cooling cycle. At the same time, the outdoor fan stops to hasten the temperature rise of the outdoor coil and lessen the time required for defrosting. The indoor blower continues to run and the supplementary heaters are energized.

LOW STAGE LOCK-OUT

NOTE: ONLY 3-5T HEAT PUMP UNITS ARE EQUIPPED WITH THE LOW STAGE LOCK-OUT FEATURE.

The outdoor system has a low stage lock-out feature. Below 39°F outdoor ambient, the system locks out low stage and operates only in high stage to provide maximum heating capacity.

DEFROST CONTROL

During operation the Defrost signal to the circuit board is controlled by a temperature sensor, which is clamped to a feeder tube entering the outdoor coil. Defrost timing periods of 30, 60 and 90 minutes may be selected by connecting the circuit board jumper to 30, 60 and 90 respectively. Accumulation of time for the timing period selected starts when the sensor contact closes (approximately 31°F), and when the wall thermostat calls for heat. At the end of the timing period, the unit's defrost cycle will be initiated provided the sensor contact remains closed. When the sensor contact opens (approximately 75°F), the defrost cycle is terminated and the timing period is reset. If the defrost cycle is not terminated due to the sensor temperature, a ten minute override interrupts the unit's defrost period.

REFRIGERANT DETECTION SYSTEM (RDS)

RDS FUNCTION

The mitigation system is a stationary device that detects the presence of R-32 refrigerant above 25% LFL using refrigerant sensors and then initiates mitigation actions. The mitigation system's primary function is to reduce the concentration of leaked R-32 refrigerant to prevent serious safety hazards. The mitigation actions are accomplished by halting HVAC operation and continuing indoor blower operation to provide airflow. Once refrigerant concentration reaches below a safe threshold, the unit will remain in mitigation mode for five minutes to evacuate any remaining R-32 refrigerant within the unit. Upon completion, the unit will resume its normal operation.

RDS OPERATION

The mitigation system is controlled by a refrigerant sensor(s), which is secured to a designated location(s) for active monitoring. If a leak is detected, HVAC operation is disabled and the indoor blower fan is activated, providing airflow at or above the minimum required airflow to evacuate excess concentration. If a Zone Control system is installed in the ductwork attached to this system, the Zone controller must be powered through a Daikin Zoning/Accessory PCB to ensure that the Zoning Dampers open during mitigation mode to provide ventilation throughout all ducting. If the unit is installed with a communicating thermostat, the thermostat will display relevant alerts/information concerning mitigation mode. Once sensors read concentration levels below a safe threshold, a five-minute timer will initiate. Once the time is over, the unit will resume its normal operation. If the sensors detect another concentration excess, the unit will go back into mitigation mode and will repeat the same process.

MAINTENANCE



WARNING

HIGH VOLTAGE!

DISCONNECT ALL POWER BEFORE SERVICING OR INSTALLING THIS UNIT. MULTIPLE POWER SOURCES MAY BE PRESENT. FAILURE TO DO SO MAY CAUSE PROPERTY DAMAGE, PERSONAL INJURY OR DEATH.



WARNING

TO PREVENT PERSONAL INJURY OR DEATH DUE TO IMPROPER INSTALLATION, ADJUSTMENT, ALTERATION, SERVICE OR MAINTENANCE, REFER TO THIS MANUAL. FOR ADDITIONAL ASSISTANCE OR INFORMATION, CONSULT A QUALIFIED INSTALLER, SERVICER AGENCY OR THE GAS SUPPLIER.



CAUTION

SHEET METAL PARTS, SCREWS, CLIPS AND SIMILAR ITEMS INHERENTLY HAVE SHARP EDGES, AND IT IS NECESSARY THAT THE INSTALLER AND SERVICE PERSONNEL EXERCISE CAUTION.

The Self Contained Packaged Air Conditioner and Heat Pump should operate for many years without excessive service calls if the unit is installed properly. However it is recommended that the owner inspect the unit before a seasonal start up. The coils should be free of debris so adequate airflow is achieved. The return and supply registers should be free of any obstructions. The filters should be cleaned or replaced. These few steps will help to keep the product up time to a maximum. The Service section that follows should help in identifying problems if the unit does not operate properly.



CAUTION

TO PREVENT PROPERTY DAMAGE DUE TO FIRE AND LOSS OF EQUIPMENT EFFICIENCY OR EQUIPMENT DAMAGE DUE TO DUST AND LINT BUILD UP ON INTERNAL PARTS, NEVER OPERATE UNIT WITHOUT AN AIR FILTER INSTALLED IN THE RETURN AIR SYSTEM.

FILTERS

Every application may require a different frequency of replacement of dirty filters. Filters must be replaced at least every three (3) months during operating seasons.

Dirty filters are the most common cause of inadequate heating or cooling performance. Filter inspection should be made at least every two months; more often if necessary because of local conditions and usage.

Dirty throwaway filters should be discarded and replaced with a new, clean filter.

Disposable return air filters are supplied with this unit. See the unit Specification Sheet or Technical Manual for the correct size and part number. To remove the filters, remove the filter access panel on return side of the unit.

CLEAN OUTSIDE COIL (QUALIFIED SERVICER ONLY)

The coil with the outside air flowing over it should be inspected annually and cleaned as frequently as necessary to keep the finned areas free of lint, hair and debris. Any air blowing or water rinsing should be performed from inside out (opposite operating airflow direction) to prevent damage to the tube and fin coil.

CLEAN INDOOR COIL (QUALIFIED SERVICER ONLY)

Before cleaning the indoor coil, A2L sensor must be removed from the unit to avoid damage and contamination. Air filters should also be removed before performing maintenance. The coil with the filtered air flowing over it should be inspected and cleaned as frequently as necessary to keep the finned areas free of debris. Coil cleaning should be performed, utilizing an approved cleaning method and cleaning agent, from inside-out (opposite operating airflow direction) to prevent damage to the tube, fin coil, and any other components. Prior to resuming unit operation, ensure to reinstall the A2L sensor.

LUBRICATION

The supply fan motors, the condenser fan motors and compressors are permanently lubricated.

FUNCTIONAL PARTS

Refer to the unit Parts Catalog for a list of functional parts. Parts are available from your distributor.

CABINET FINISH MAINTENANCE

Use a fine grade automotive wax on the cabinet finish to maintain the finish's original high luster. This is especially important in installations with extended periods of direct sunlight.

RECOVERY

When removing refrigerant from a system, either for servicing or decommissioning, it is recommended good practice that all refrigerants are removed safely.

When transferring refrigerant into cylinders, ensure that only appropriate refrigerant recovery cylinders are employed. Ensure that the correct number of cylinders for holding the total system charge is available. All cylinders to be used are designated for the recovered refrigerant and labeled for that refrigerant (i.e. special cylinders for the recovery of refrigerant). Cylinders shall be complete with pressure-relief valve and associated shut-off valves in good working order. Empty recovery cylinders are evacuated and, if possible, cooled before recovery occurs.

The recovery equipment shall be in good working order with a set of instructions concerning the equipment that is at hand and shall be suitable for the recovery of the flammable refrigerant. If in doubt, the manufacturer should be consulted. In addition, a set of calibrated weighing scales shall be available and in good working order. Hoses shall be complete with leak-free disconnect couplings and in good condition.

The recovered refrigerant shall be processed according to local legislation in the correct recovery cylinder, and the relevant waste transfer note arranged. Do not mix refrigerants in recovery units and especially not in cylinders.

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

CHARGING PROCEDURES

In addition to conventional charging procedures, the following requirements shall be followed.

- Ensure that contamination of different refrigerants does not occur when using charging equipment.
- Hoses or lines shall be as short as possible to minimize the amount of refrigerant contained in them.
- Cylinders shall be kept in an appropriate position according to the instructions.
- Ensure that the REFRIGERATING SYSTEM is earthed prior to charging the system with refrigerant.
- Extreme care shall be taken not to overfill the REFRIGERATING SYSTEM.

Prior to recharging the system, it shall be pressure- tested with the appropriate purging gas.

The system shall be leak-tested on completion of charging but prior to commissioning. A follow up leak test shall be carried out prior to leaving the site.

IMPORTANT NOTE: REFER TO THE STANDING PRESSURE TEST/LEAK DETECTION METHOD REFERENCED LATER IN THIS MANUAL.

NOTE: "EARTHING" IS DEFINED AS ACHIEVING AN EARTH GROUND BY CONNECTING THE EQUIPMENT'S SUPPLIED GROUNDING LUG TO THE EARTH. THIS SHOULD BE VERIFIED BY A CERTIFIED TECHNICIAN.

SERVICING MEASURES FOR THE REFRIGERANT DETECTION SYSTEM:

Before servicing, identify the mode of operation of the system by reading the LED flashing pattern on the PCB within the control box and matching the LED flashing pattern with mode of operation in the REFRIGERANT DETECTION SYSTEM TROUBLESHOOTING GUIDE on the wiring diagram which is attached on the back side of the control box panel (RDS PCB Fault Code table). After identifying the mode of operation, take recommended actions as specified in the Recommended Actions for PCB LED Flashing Codes table.

REFRIGERANT SENSORS for REFRIGERANT DETECTION SYSTEMS shall only be replaced with sensors specified by the manufacturer. If REFRIGERANT SENSOR requires replacement, please replace with Sensata R32 Sensor PN#RGD-00ML12 (Daikin PN#SER2A08011).'

LED STATUS	
MODE	LED FLASHING PATTERN
NORMAL OPERATION	SLOW LED FLASHING PATTERN (2 SECONDS ON 2 SECONDS OFF)
R-32 LEAK ALARM	FAST LED FLASHING PATTERN
DELAY MODE	LED WILL BE ON CONTINUOUSLY
SYSTEM VERIFICATION MODE	FAST LED FLASHING PATTERN
CONTROL BOARD INTERNAL FAULT	LED WILL FLASH 2 TIMES AND THEN BE OFF FOR 5 SECONDS
R32 SENSOR COMMUNICATION FAULT	LED WILL FLASH 3 TIMES AND THEN BE OFF FOR 5 SECONDS
R32 SENSOR FAULT	LED WILL FLASH 4 TIMES AND THEN BE OFF FOR 5 SECONDS

RDS PCB FAULT CODE TABLE

TROUBLESHOOTING CODE

LED TROUBLESHOOT STATUS					
	MODE	DEFINITION	LED FLASHING PATTERN	RECOMMENDED ACTIONS	NOTES
1	Normal Operation	No faults to report.	Slow LED flashing pattern (2 seconds on and 2 seconds off)	No actions needed.	
2	R32 Leak Alarm	R32 leak is currently being detected.	Fast LED Flashing Pattern	A technician will need to find where the refrigerant leak and address it. Unit shall be thawed before servicing.	In terms of the controls, no action is needed. The controls and sensor are working fine.
3	Delay Mode	After R32 leak or alarm has been cleared, the unit will remain in alarm mode for 5 minutes before returning to normal operation.	LED will be on continuously	No action needed - If the system was previously experiencing an actual R32 Leak, the refrigerant can no longer be detected by the sensor meaning it's either gone and the system won't work anymore or there was a false alarm. If the system was experiencing a Fault, the fault is gone and the system will return to normal operation in 5 min.	After any alarm or fault, it is required to remain in R32 mitigation mode for 5 minutes.
4	System Verification Mode	Manual test run by contractor to simulate R32 Leak Alarm (test will last for 5 minutes max).	Fast LED Flashing Pattern	No actions needed.	To enter system verification test mode, press the button on the control 2 times within 5 seconds. The control will enter a simulated R32 Leak Alarm state and remain in that mode for 5 minutes. After 5 minutes, the control will return to Normal Operation automatically. If the contractor wants to end the test early they need to press the button one time.
5	Control Board Internal Fault	Control board has detected an issue with the R32 detection system.	LED will flash 2 times and then be off for 5 seconds, before repeating pattern	1) Unplug and plug the R32 sensor back in. Cycle power to the system. 2) If the control is in "Normal Operation" or "Delay Mode", there is no more issue. If not, continue with diagnostics 3) Unplug R32 sensor and leave unplugged. Cycle power to the system 4) If the control still displays "Control Board Internal Fault" (2 flash pattern), replace the control. If the control now displays "R32 Sensor Communication Fault" (3 flash pattern), replace the sensor.	This error could indicate an on board relay failure or a short with the sensor communications. A sensor communication short could occur on the board itself or external to the board. These steps will determine if the error is on the board or external to the board.
6	R32 Sensor Communication Fault	Control board does not have communications with R32 sensor.	LED will flash 3 times and then be off for 5 seconds, before repeating pattern	1) Unplug and plug the R32 sensor back in. Cycle power to the system. 2) If control is in "Normal Operation" or "Delay Mode", there is no more issue. If not, continue with diagnostics. 3) If the control still displays "R32 Sensor Communication Fault" (3 flash pattern), replace both the sensor and the PCB.	If the control cannot talk to the sensor there could be a problem with the sensor, a problem with the sensor harness or a problem internal to the control. The field will not be able to measure anything to reliably fix this error assuming the connector is properly secured to the control. Replacing both is the only option.
7	R32 Sensor Fault	R32 Sensor has reported an internal issue.	LED will flash 4 times and then be off for 5 seconds, before repeating pattern	Replace R32 sensor.	Communications to the sensor are perfectly fine. The sensor itself is reporting an internal fault.

RECOMMENDED ACTIONS FOR PCB LED FLASHING CODES TABLE

	warning; flammable materials
	service indicator; read technical manual
	operator's manual; operating instructions
	warning; low burning velocity material
	UN GHS flame symbol

MARKING SYMBOL TABLE

THE FOLLOWING INSTRUCTIONS ARE MANDATORY FOR A2L SYSTEMS AND SUPERSEDE OTHER INSTRUCTIONS

WARNING

ONLY BRAZING TECHNIQUES AND APPROVED MECHANICAL JOINTS SHOULD BE USED TO CONNECT REFRIGERANT TUBING CONNECTIONS. NON-APPROVED MECHANICAL CONNECTORS AND OTHER METHODS ARE NOT PERMITTED IN THIS SYSTEM CONTAINING A2L REFRIGERANT. APPROVED MECHANICAL JOINTS WILL BE DETAILED IN THE PRODUCT'S SPECIFICATION SHEETS.

STANDING PRESSURE TEST/ LEAK DETECTION METHOD

Using dry nitrogen or dry helium, pressurize the system to 450 PSIG. Allow the pressure to stabilize and hold for 15 Minutes (minimum). The system is considered leak-free if the pressure does not drop below 450 PSIG. If, after 15 Minutes, the pressure drops below 450 PSIG, it implies a leak in the system. Proceed with identifying and sealing the leak and repeating the Standing Pressure Test. Leak test the system using dry nitrogen or dry helium and soapy water to identify leaks. **No refrigerant shall be used for pressure testing to detect leaks.** Proceed to system evacuation using the Deep Vacuum Method.

DEEP VACUUM METHOD

The Deep Vacuum Method requires a vacuum pump rated for 500 microns or less. This method effectively and efficiently ensures the system is free of non-condensable air and moisture. The Triple Evacuation Method is detailed in the Service Manual for this product model as an alternative. To expedite the evacuation procedure, it is recommended that the Schrader Cores be removed from the service valves using a core-removal tool.

1. Connect the vacuum pump, micron gauge, and vacuum-rated hoses to both service valves. Evacuation must use both service valves to eliminate system mechanical seals.
2. Evacuate the system to less than 500 microns.
3. Isolate the pump from the system and hold the vacuum for 10 minutes (minimum). Typically, pressure will rise slowly during this period. If the pressure rises to less than 1000 microns and remains steady, the system is considered leak-free; proceed to system charging and startup.
4. If pressure rises above 1000 microns but holds steady below 2000 microns, non-condensable air or moisture may remain, or a small leak may be present. Return to step 2: If the same result is achieved, check for leaks and repair. Repeat the evacuation procedure.
5. If pressure rises above 2000 microns, a leak is present. Check for leaks and repair them. Then, repeat the evacuation procedure.

ACCESSORY INSTALLATION

WARNING

ALL ACCESSORIES THAT MAY BECOME A POTENTIAL IGNITION SOURCE IF INSTALLED, SUCH AS ELECTRONIC AIR CLEANERS, MUST ONLY BE POWERED THROUGH OUR ACCESSORY CONTROL BOARD KIT. IF AN ELECTRONIC AIR CLEANER IS ALREADY INSTALLED IN THE DUCT WORK AND NOT CONNECTED TO THE ACCESSORY CONTROL BOARD, IT WILL HAVE TO BE DISABLED OR REMOVED. ENSURE THAT ANY ADDITIONAL WIRING FROM THE INDOOR UNIT TO THE ACCESSORY CONTROL BOARD IS ROUTED AND PROTECTED FROM DAMAGE AND WEAR, AVOIDING THE FLUE PIPE AND ANY JOINTS THAT MAY NEED BRAZED OR DISCONNECTED FOR SERVICE. REFER TO THE PRODUCT SPECIFICATION SHEET FOR THE ACCESSORY CONTROL BOARD KIT PART NUMBER

ALTITUDE ADJUSTMENT FACTOR TO CALCULATE MINIMUM ROOM AREA

The Indoor equipment mitigation requirements are calculated at sea level. For higher altitudes adjust the minimum room area specified on or near the Serial Plate by the corresponding altitude adjustment factor shown below. This table is provided as a reference.

Adjusted room area ($A_{\min \text{ adj}}$) is the product of the minimum room area specified in the serial plate and the adjustment factor AF, as shown in below formula

$$A_{\min \text{ adj}} = A_{\min} (\text{serial plate}) * AF$$

Height in meters	Height in feet	Altitude Adjustment Factor (AF)
At sea level	At sea level	1.00
1~200	1~660	1.02
200~400	660~1320	1.03
400~600	1320~1970	1.05
600~800	1970~2630	1.07
800~1000	2630~3290	1.09
1000~1200	3290~3940	1.11
1200~1400	3940~4600	1.13
1400~1600	4600~5250	1.15
1600~1800	5250~5910	1.17
1800~2000	5910~6570	1.19
2000~2200	6570~7220	1.21
2200~2400	7220~7880	1.24
2400~2600	7880~8540	1.26
2600~2800	8540~9190	1.29
2800~3000	9190~9850	1.31
3000~3200	9850~10500	1.34

APPENDIX A BLOWER PERFORMANCE TABLES - AC

3 Ton

Standard Static Drive

Models: DHC0361D and DHC0363D

Downflow				
Speed Tap	External Static	SCFM	RPM	BHP
T1*	0.2	1080	570	0.15
	0.4	1080	620	0.16
	0.6	990	695	0.18
	0.8	890	760	0.2
T2**	0.2	1315	605	0.22
	0.4	1220	660	0.24
	0.6	1125	730	0.26
	0.8	1010	800	0.29
T3	0.2	1315	605	0.22
	0.4	1220	660	0.24
	0.6	1125	730	0.26
	0.8	1010	800	0.29
T4	0.2	1315	605	0.22
	0.4	1220	660	0.24
	0.6	1125	730	0.26
	0.8	1010	800	0.29
T5	0.2			
	0.4	1540	810	0.41
	0.6	1445	860	0.44
	0.8	1340	925	0.46

Horizontal				
Speed Tap	External Static	SCFM	RPM	BHP
T1*	0.2	1100	560	0.14
	0.4	1100	610	0.16
	0.6	1010	680	0.17
	0.8	910	745	0.19
T2**	0.2	1340	595	0.21
	0.4	1245	645	0.23
	0.6	1150	715	0.26
	0.8	1030	785	0.28
T3	0.2	1340	595	0.21
	0.4	1245	645	0.23
	0.6	1150	715	0.26
	0.8	1030	785	0.28
T4	0.2	1340	595	0.21
	0.4	1245	645	0.23
	0.6	1150	715	0.26
	0.8	1030	785	0.28
T5	0.2			
	0.4	1575	790	0.4
	0.6	1475	845	0.44
	0.8	1365	910	0.47

3 Ton

Standard Static Drive

Models: DHC0364D and DHC0367D

Downflow				
Speed Tap	External Static	SCFM	RPM	BHP
T1*	0.2	1105	580	0.15
	0.4	935	680	0.17
	0.6	770	765	0.2
	0.8	615	820	0.21
T2**	0.2	1490	685	0.28
	0.4	1370	755	0.31
	0.6	1230	840	0.34
	0.8	1075	915	0.37
T3	0.2	1370	650	0.23
	0.4	1250	735	0.26
	0.6	1100	820	0.29
	0.8	945	890	0.32
T4	0.2	1490	685	0.28
	0.4	1370	755	0.31
	0.6	1230	840	0.34
	0.8	1075	915	0.37
T5	0.2			
	0.4	1605	820	0.43
	0.6	1500	900	0.47
	0.8	1345	985	0.51

Horizontal				
Speed Tap	External Static	SCFM	RPM	BHP
T1*	0.2	1115	575	0.15
	0.4	945	675	0.17
	0.6	780	755	0.19
	0.8	620	810	0.21
T2**	0.2	1505	680	0.28
	0.4	1385	745	0.3
	0.6	1240	830	0.34
	0.8	1085	905	0.37
T3	0.2	1385	645	0.23
	0.4	1265	730	0.26
	0.6	1110	810	0.29
	0.8	955	880	0.31
T4	0.2	1505	680	0.28
	0.4	1385	745	0.3
	0.6	1240	830	0.34
	0.8	1085	905	0.37
T5	0.2			
	0.4	1620	805	0.42
	0.6	1525	880	0.47
	0.8	1355	975	0.51

T1 VALUES ARE FOR FAN MODE OR PART LOAD ONLY. T2 VALUES ARE FOR PART LOAD ONLY

APPENDIX A BLOWER PERFORMANCE DATA - AC

4 Ton

Standard Static Drive

Models: DHC0481D and DHC0483D

Downflow				
Speed Tap	External Static	SCFM	RPM	BHP
T1*	0.2	1105	510	0.1
	0.4	1000	565	0.11
	0.6	865	665	0.14
	0.8	745	725	0.15
T2**	0.2	1675	765	0.39
	0.4	1615	790	0.4
	0.6	1555	835	0.42
	0.8	1490	885	0.45
T3	0.2	1645	750	0.36
	0.4	1580	775	0.38
	0.6	1515	825	0.4
	0.8	1450	875	0.42
T4	0.2	1745	795	0.44
	0.4	1695	820	0.45
	0.6	1640	850	0.47
	0.8	1585	905	0.5
T5	0.2	1770	805	0.46
	0.4	1725	835	0.48
	0.6	1670	860	0.49
	0.8	1620	910	0.52

Horizontal				
Speed Tap	External Static	SCFM	RPM	BHP
T1*	0.2	1125	505	0.1
	0.4	1005	560	0.11
	0.6	885	650	0.13
	0.8	755	710	0.15
T2**	0.2	1710	750	0.38
	0.4	1645	775	0.39
	0.6	1585	820	0.41
	0.8	1520	865	0.44
T3	0.2	1680	735	0.36
	0.4	1610	760	0.37
	0.6	1545	810	0.39
	0.8	1480	860	0.42
T4	0.2	1780	780	0.43
	0.4	1730	805	0.44
	0.6	1675	835	0.46
	0.8	1615	885	0.49
T5	0.2	1805	790	0.45
	0.4	1760	820	0.47
	0.6	1705	845	0.48
	0.8	1650	890	0.51

4 Ton

Standard Static Drive

Models: DHC0484D and DHC0487D

Downflow				
Speed Tap	External Static	SCFM	RPM	BHP
T1*	0.2	965	555	0.11
	0.4	795	660	0.14
	0.6	635	735	0.16
	0.8	445	830	0.17
T2**	0.2	1755	795	0.44
	0.4	1635	850	0.47
	0.6	1525	910	0.5
	0.8	1420	975	0.53
T3	0.2	1625	755	0.37
	0.4	1500	810	0.39
	0.6	1385	880	0.43
	0.8	1270	945	0.46
T4	0.2	1755	795	0.44
	0.4	1635	850	0.47
	0.6	1525	910	0.5
	0.8	1420	975	0.53
T5	0.2	1945	870	0.55
	0.4	1835	910	0.57
	0.6	1730	965	0.62
	0.8	1625	1020	0.65

Horizontal				
Speed Tap	External Static	SCFM	RPM	BHP
T1*	0.2	975	550	0.11
	0.4	800	655	0.13
	0.6	645	725	0.15
	0.8	445	820	0.18
T2**	0.2	1775	785	0.43
	0.4	1650	840	0.46
	0.6	1540	900	0.49
	0.8	1435	965	0.53
T3	0.2	1640	745	0.36
	0.4	1515	800	39
	0.6	1400	870	0.42
	0.8	1285	935	0.45
T4	0.2	1775	785	0.43
	0.4	1650	840	0.46
	0.6	1540	900	0.49
	0.8	1435	965	0.53
T5	0.2	1970	860	0.54
	0.4	1855	930	0.57
	0.6	1745	955	0.61
	0.8	1640	1010	0.64

T1 VALUES ARE FOR FAN MODE OR PART LOAD ONLY. T2 VALUES ARE FOR PART LOAD ONLY

APPENDIX A BLOWER PERFORMANCE TABLES - AC

5 Ton

Standard Static Drive

Models: DHC0601D and DHC0603D

Downflow				
Speed Tap	External Static	SCFM	RPM	BHP
T1*	0.2	1185	605	0.16
	0.4	1065	690	0.19
	0.6	920	765	0.2
	0.8	820	835	0.22
T2**	0.2	2110	910	0.74
	0.4	2030	955	0.77
	0.6	1960	1000	0.81
	0.8	1885	1050	0.85
T3	0.2	1980	870	0.62
	0.4	1900	920	0.66
	0.6	1825	965	0.69
	0.8	1750	1015	0.73
T4	0.2	2175	925	0.79
	0.4	2095	975	0.84
	0.6	2020	1020	0.87
	0.8	1950	1065	0.91
T5	0.2	2285	955	0.91
	0.4	2200	1005	0.96
	0.6	2120	1050	1
	0.8	2050	1090	1.04

Horizontal				
Speed Tap	External Static	SCFM	RPM	BHP
T1*	0.2	1205	590	0.15
	0.4	1085	675	0.18
	0.6	940	755	0.21
	0.8	835	820	0.22
T2**	0.2	2150	890	0.72
	0.4	2070	935	0.76
	0.6	2000	980	0.79
	0.8	1925	1030	0.83
T3	0.2	2020	855	0.61
	0.4	1940	900	0.64
	0.6	1860	945	0.68
	0.8	1785	995	0.71
T4	0.2	2220	905	0.78
	0.4	2135	955	0.82
	0.6	2060	1000	0.86
	0.8	1990	1045	0.9
T5	0.2	2330	935	0.89
	0.4	2245	985	0.94
	0.6	2160	1030	0.98
	0.8	2090	1070	1.02

5 Ton

Standard Static Drive

Models: DHC0604D and DHC0607D

Downflow				
Speed Tap	External Static	SCFM	RPM	BHP
T1*	0.2	1200	620	0.17
	0.4	1070	705	0.19
	0.6	935	790	0.21
	0.8	785	875	0.24
T2**	0.2	1950	860	0.55
	0.4	1860	910	0.58
	0.6	1780	960	0.62
	0.8	1695	1015	0.65
T3	0.2	2070	900	0.64
	0.4	1985	945	0.68
	0.6	1910	995	0.71
	0.8	1835	1040	0.74
T4	0.2	2030	890	0.61
	0.4	1945	935	0.65
	0.6	1870	980	0.68
	0.8	1790	1030	0.71
T5	0.2	2155	940	0.7
	0.4	2105	980	0.74
	0.6	2005	1020	0.78
	0.8	1935	1065	0.81

Horizontal				
Speed Tap	External Static	SCFM	RPM	BHP
T1*	0.2	1215	620	0.16
	0.4	1080	705	0.19
	0.6	940	780	0.22
	0.8	795	865	0.23
T2**	0.2	1970	850	0.55
	0.4	1880	900	0.58
	0.6	1800	950	0.61
	0.8	1710	1005	0.65
T3	0.2	2090	890	0.64
	0.4	2005	935	0.67
	0.6	1930	985	0.7
	0.8	1855	1030	0.74
T4	0.2	2050	880	0.61
	0.4	1965	925	0.64
	0.6	1890	970	0.67
	0.8	1810	1020	0.7
T5	0.2	2175	930	0.7
	0.4	2100	965	0.73
	0.6	2025	1010	0.76
	0.8	1960	1055	0.8

T1 VALUES ARE FOR FAN MODE OR PART LOAD ONLY. T2 VALUES ARE FOR PART LOAD ONLY

APPENDIX A BLOWER PERFORMANCE TABLES - AC

6 Ton

Standard Static Drive

Models: DHC0723D, DHC0724D, and DHC0727D

Downflow				
Speed Tap	External Static	SCFM	RPM	BHP
T1*	0.2	1445	645	0.24
	0.4	1315	720	0.27
	0.6	1185	810	0.3
	0.8	1040	890	0.32
T2**	0.2	2301	832	0.77
	0.4	2229	882	0.82
	0.6	2156	929	0.86
	0.8	2083	979	0.91
T3	0.2	2195	890	0.63
	0.4	2110	930	0.66
	0.6	2010	970	0.68
	0.8	1900	1025	0.72
T4	0.2	2301	903	0.84
	0.4	2229	935	0.87
	0.6	2156	987	0.92
	0.8	2083	1034	0.96
T5	0.2	2435	972	0.93
	0.4	2362	1007	0.96
	0.6	2293	1043	0.99
	0.8	2209	1066	1.03

Horizontal				
Speed Tap	External Static	SCFM	RPM	BHP
T1*	0.2	1435	655	0.25
	0.4	1315	735	0.28
	0.6	1215	810	0.31
	0.8	1075	890	0.33
T2**	0.2	2348.22	926	0.86
	0.4	2274.11	973	0.9
	0.6	2200	1020	0.95
	0.8	2125.89	1066	0.99
T3	0.2	2160	870	0.61
	0.4	2070	925	0.66
	0.6	1970	975	0.69
	0.8	1880	1035	0.74
T4	0.2	2348.22	926	0.86
	0.4	2274.11	973	0.9
	0.6	2200	1020	0.95
	0.8	2125.89	1066	0.99
T5	0.2	2404	961	0.91
	0.4	2347	995	0.95
	0.6	2273	1050	1
	0.8	2193	1100	1.05

T1 VALUES ARE FOR FAN MODE OR PART LOAD ONLY. T2 VALUES ARE FOR PART LOAD ONLY

APPENDIX A BLOWER PERFORMANCE TABLES - AC

3 Ton Cooler

High Static Drive

Models: DHC0363W, DHC0364W, DHC0367W

Downflow									
Speed Tap	External Static	SCFM	RPM	BHP	Speed Tap	External Static	SCFM	RPM	BHP
T1C*	0.8	404	813	0.16	T1'H*	0.8	1398	959	0.5
	1					1	1246	1037	0.54
	1.2					1.2	1140	1090	0.57
	1.4					1.4	1040	1136	0.59
	1.6					1.6	918	1196	0.63
	1.8					1.8	799	1252	0.66
	2					2	680	1310	0.7
T2C**	0.8	792	863	0.26	T2'H**	0.8	1474	1008	0.57
	1	640	937	0.28		1	1366	1058	0.6
	1.2	485	990	0.29		1.2	1259	1109	0.63
	1.4					1.4	1155	1160	0.66
	1.6					1.6	1060	1205	0.69
	1.8					1.8	947	1260	0.72
	2					2	830	1312	0.75
T3C	0.8	1474	1008	0.57	T3'H	0.8			
	1	1366	1058	0.6		1	1664	992	0.63
	1.2	1259	1109	0.63		1.2	1524	1059	0.67
	1.4	1155	1160	0.66		1.4	1273	1179	0.74
	1.6	1060	1205	0.69		1.6	1179	1227	0.77
	1.8	947	1260	0.72		1.8	1081	1273	0.8
	2	830	1312	0.75		2	964	1327	0.84
T4C	0.8				T4'H	0.8			
	1	1664	992	0.63		1	1568	1116	0.77
	1.2	1524	1059	0.67		1.2	1473	1161	0.8
	1.4	1273	1179	0.74		1.4	1379	1205	0.83
	1.6	1179	1227	0.77		1.6	1284	1249	0.86
	1.8	1081	1273	0.8		1.8	1197	1294	0.89
	2	964	1327	0.84		2	1095	1337	0.92
T5C	0.8				T5'H	0.8			
	1					1			
	1.2	1568	1184	0.88		1.2			
	1.4	1481	1227	0.91		1.4			
	1.6	1393	1269	0.94		1.6	1550	1300	1.06
	1.8	1307	1312	0.97		1.8	1485	1335	1.09
	2	1218	1354	1		2	1405	1370	1.12

3 Ton Cooler

High Static Drive

Models: DHC0363W, DHC0364W, DHC0367W

Horizontal									
Speed Tap	External Static	SCFM	RPM	BHP	Speed Tap	External Static	SCFM	RPM	BHP
T1C*	0.8				T1'H*	0.8	1362	958	0.5
	1					1	1238	1016	0.53
	1.2					1.2	1115	1072	0.56
	1.4					1.4	1014	1128	0.59
	1.6					1.6	925	1184	0.62
	1.8					1.8	791	1229	0.64
	2					2	677	1283	0.67
T2C**	0.8	766	854	0.25	T2'H**	0.8	1482	973	0.56
	1	629	923	0.27		1	1351	1039	0.59
	1.2	460	977	0.29		1.2	1239	1089	0.62
	1.4					1.4	1136	1139	0.65
	1.6					1.6	1041	1193	0.68
	1.8					1.8	949	1249	0.71
	2					2	843	1289	0.74
T3C	0.8	1482	973	0.56	T3'H	0.8	1562	1010	0.63
	1	1351	1039	0.59		1	1463	1060	0.67
	1.2	1239	1089	0.62		1.2	1349	1109	0.7
	1.4	1136	1139	0.65		1.4	1251	1160	0.73
	1.6	1041	1193	0.68		1.6	1145	1209	0.76
	1.8	949	1249	0.71		1.8	1062	1259	0.79
	2	843	1289	0.74		2	970	1310	0.83
T4C	0.8	1562	1010	0.63	T4'H	0.8			
	1	1463	1060	0.67		1	1556	1085	0.75
	1.2	1349	1109	0.7		1.2	1461	1133	0.78
	1.4	1251	1160	0.73		1.4	1359	1180	0.81
	1.6	1145	1209	0.76		1.6	1259	1228	0.85
	1.8	1062	1259	0.79		1.8	1162	1278	0.88
	2	970	1310	0.83		2	1082	1325	0.91
T5C	0.8				T5'H	0.8			
	1					1			
	1.2	1540	1147	0.84		1.2			
	1.4	1453	1195	0.88		1.4	1610	1225	0.99
	1.6	1358	1241	0.92		1.6	1510	1265	1.04
	1.8	1262	1286	0.95		1.8	1410	1305	1.07
	2	1193	1339	0.99		2	1360	1365	1.11

T1C AND T1'H VALUES ARE FOR FAN MODE OR PART LOAD ONLY. T2C AND T2'H VALUES ARE FOR PART LOAD ONLY

APPENDIX A BLOWER PERFORMANCE TABLES - AC

4 Ton Cooler

High Static Drive

Models: DHC0483W, DHC0484W, DHC0487W

Downflow									
Speed Tap	External Static	SCFM	RPM	BHP	Speed Tap	External Static	SCFM	RPM	BHP
T1C*	0.8	414	822	0.18	T1'H*	0.8	1675	1029	0.7
	1					1	1580	1083	0.73
	1.2					1.2	1484	1136	0.77
	1.4					1.4	1365	1194	0.81
	1.6					1.6	1258	1243	0.84
	1.8					1.8	1161	1288	0.87
	2					2	1045	1341	0.91
T2C**	0.8	1139	923	0.4	T2'H**	0.8	1791	1054	0.79
	1	1009	988	0.42		1	1691	1110	0.83
	1.2	893	1045	0.45		1.2	1606	1159	0.87
	1.4	753	1113	0.48		1.4	1513	1211	0.91
	1.6	511	1207	0.52		1.6	1389	1269	0.95
	1.8	629	1159	0.5		1.8	1283	1314	0.98
	2					2	1191	1357	1.02
T3C	0.8	1791	1054	0.79	T3'H	0.8	1900	1085	0.89
	1	1691	1110	0.83		1	1802	1140	0.94
	1.2	1606	1159	0.87		1.2	1714	1191	0.98
	1.4	1513	1211	0.97		1.4	1623	1237	1.02
	1.6	1389	1269	0.95		1.6	1519	1292	1.06
	1.8	1283	1314	0.98		1.8	1407	1340	1.1
	2	1191	1357	1.02		2	1313	1385	1.14
T4C	0.8	2000	1115	0.98	T4'H	0.8	2000	1115	0.98
	1	1914	1162	1.02		1	1914	1162	1.02
	1.2	1827	1211	1.07		1.2	1827	1211	1.07
	1.4	1747	1254	1.1		1.4	1747	1254	1.1
	1.6	1655	1304	1.15		1.6	1655	1304	1.15
	1.8	1542	1356	1.19		1.8	1542	1356	1.19
	2	1444	1398	1.23		2	1444	1398	1.23
T5C	0.8	2188	1141	1.08	T5'H	0.8	2188	1141	1.08
	1	2090	1187	1.12		1	2090	1187	1.12
	1.2	1992	1233	1.17		1.2	1992	1233	1.17
	1.4	1909	1276	1.22		1.4	1909	1276	1.22
	1.6	1830	1321	1.26		1.6	1830	1321	1.26
	1.8	1732	1373	1.31		1.8	1732	1373	1.31
	2	1601	1418	1.35		2	1601	1418	1.35

4 Ton Cooler

High Static Drive

Models: DHC0483W, DHC0484W, DHC0487W

Horizontal									
Speed Tap	External Static	SCFM	RPM	BHP	Speed Tap	External Static	SCFM	RPM	BHP
T1C*	0.8	473	826	0.18	T1'H*	0.8	1758	989	0.67
	1					1	1676	1038	0.7
	1.2					1.2	1576	1100	0.75
	1.4					1.4	1452	1165	0.79
	1.6					1.6	1337	1220	0.83
	1.8					1.8	1250	1268	0.86
	2					2	1165	1314	0.89
T2C**	0.8	1203	903	0.39	T2'H**	0.8	1885	1014	0.76
	1	1076	972	0.42		1	1797	1063	0.8
	1.2	964	1032	0.44		1.2	1707	1114	0.84
	1.4	808	1115	0.48		1.4	1600	1180	0.88
	1.6	696	1164	0.5		1.6	1483	1239	0.93
	1.8	907	1206	0.52		1.8	1383	1291	0.97
	2	460	1247	0.53		2	1293	1330	1
T3C	0.8	1885	1014	0.76	T3'H	0.8	1999	1041	0.86
	1	1797	1063	0.8		1	1912	1090	0.9
	1.2	1707	1114	0.84		1.2	1834	1133	0.93
	1.4	1600	1180	0.88		1.4	1736	1190	0.98
	1.6	1483	1239	0.93		1.6	1634	1251	1.03
	1.8	1383	1291	0.97		1.8	1516	1304	1.07
	2	1293	1330	1		2	1419	1350	1.11
T4C	0.8	1744	1048	0.94	T4'H	0.8	1744	1048	0.94
	1	1844	1101	0.98		1	1844	1101	0.98
	1.2	1944	1154	1.02		1.2	1944	1154	1.02
	1.4	1863	1205	1.06		1.4	1863	1205	1.06
	1.6	1765	1265	1.11		1.6	1765	1265	1.11
	1.8	1656	1318	1.16		1.8	1656	1318	1.16
	2	1544	1366	1.2		2	1544	1366	1.2
T5C	0.8	2264	1064	1	T5'H	0.8	2264	1064	1
	1	2166	1117	1.06		1	2166	1117	1.06
	1.2	2068	1170	1.11		1.2	2068	1170	1.11
	1.4	1970	1223	1.16		1.4	1970	1223	1.16
	1.6	1888	1273	1.21		1.6	1888	1273	1.21
	1.8	1789	1328	1.26		1.8	1789	1328	1.26
	2	1676	1382	1.32		2	1676	1382	1.32

T1C AND T1'H VALUES ARE FOR FAN MODE OR PART LOAD ONLY. T2C AND T2'H VALUES ARE FOR PART LOAD ONLY

APPENDIX A BLOWER PERFORMANCE TABLES - AC

5 Ton Cooler

High Static Drive

Models: DHC0603W, DHC0604W, DHC0607W

Downflow									
Speed Tap	External Static	SCFM	RPM	BHP	Speed Tap	External Static	SCFM	RPM	BHP
T1C*	0.8	537	845	0.18	T1'H*	0.8	2011	1142	0.98
	1					1	1926	1192	1.02
	1.2					1.2	1847	1237	1.06
	1.4					1.4	1774	1281	1.1
	1.6					1.6	1698	1324	1.13
	1.8					1.8	1602	1371	1.17
	2					2	1517	1417	1.21
T2C**	0.8	1510	1013	0.57	T2'H**	0.8	2114	1169	1.07
	1	1422	1066	0.6		1	2031	1217	1.12
	1.2	1325	1121	0.63		1.2	1955	1261	1.16
	1.4	1217	1175	0.66		1.4	1878	1303	1.19
	1.6	1113	1231	0.69		1.6	1808	1344	1.23
	1.8	1008	1286	0.72		1.8	1722	1385	1.27
	2	924	1332	0.75		2	1645	1429	1.31
T3C	0.8	2114	1169	1.07	T3'H	0.8	2205	1193	1.18
	1	2031	1217	1.12		1	2123	1241	1.23
	1.2	1955	1261	1.16		1.2	2050	1286	1.27
	1.4	1878	1303	1.19		1.4	1981	1328	1.31
	1.6	1808	1344	1.23		1.6	1909	1367	1.35
	1.8	1722	1385	1.27		1.8	1829	1406	1.39
	2	1645	1429	1.31		2	1753	1448	1.43
T4C	0.8	2286	1217	1.29	T4'H	0.8	2286	1217	1.29
	1	2225	1263	1.34		1	2225	1263	1.34
	1.2	2151	1307	1.38		1.2	2151	1307	1.38
	1.4	2075	1349	1.43		1.4	2075	1349	1.43
	1.6	2002	1386	1.47		1.6	2002	1386	1.47
	1.8	1939	1426	1.51		1.8	1939	1426	1.51
	2	1855	1463	1.55		2	1855	1463	1.55
T5C	0.8	2363	1243	1.41	T5'H	0.8	2363	1243	1.41
	1	2285	1291	1.46		1	2285	1291	1.46
	1.2	2226	1331	1.5		1.2	2226	1331	1.5
	1.4	2159	1372	1.55		1.4	2159	1372	1.55
	1.6	2090	1409	1.59		1.6	2090	1409	1.59
	1.8	2029	1445	1.63		1.8	2029	1445	1.63
	2	1954	1483	1.68		2	1954	1483	1.68

5 Ton Cooler

High Static Drive

Models: DHC0603W, DHC0604W, DHC0607W

Horizontal									
Speed Tap	External Static	SCFM	RPM	BHP	Speed Tap	External Static	SCFM	RPM	BHP
T1C*	0.8	752	769	0.16	T1'H*	0.8	2075	1100	0.94
	1	597	846	0.18		1	2001	1155	0.99
	1.2	401	888	0.19		1.2	1939	1205	1.03
	1.4					1.4	1833	1268	1.09
	1.6					1.6	1750	1318	1.13
	1.8					1.8	1660	1365	1.17
	2					2	1575	1410	1.21
T2C**	0.8	1569	993	0.56	T2'H**	0.8	2179	1124	1.03
	1	1458	1058	0.59		1	2110	1179	1.08
	1.2	1355	1118	0.63		1.2	2051	1220	1.12
	1.4	1260	1174	0.66		1.4	1945	1285	1.18
	1.6	1158	1228	0.69		1.6	1867	1336	1.22
	1.8	1069	1279	0.72		1.8	1783	1380	1.26
	2	985	1324	0.74		2	1698	1427	1.31
T3C	0.8	2179	1124	1.03	T3'H	0.8	2277	1151	1.14
	1	2110	1179	1.08		1	2202	1197	1.18
	1.2	2051	1220	1.12		1.2	2151	1245	1.23
	1.4	1945	1285	1.18		1.4	2056	1304	1.29
	1.6	1867	1336	1.22		1.6	1970	1358	1.34
	1.8	1783	1380	1.26		1.8	1891	1403	1.39
	2	1698	1427	1.31		2	1803	1443	1.43
T4C	0.8	2349	1168	1.24	T4'H	0.8	2349	1168	1.24
	1	2289	1212	1.28		1	2289	1212	1.28
	1.2	2209	1268	1.34		1.2	2209	1268	1.34
	1.4	2166	1309	1.39		1.4	2166	1309	1.39
	1.6	2069	1366	1.45		1.6	2069	1366	1.45
	1.8	1994	1411	1.49		1.8	1994	1411	1.49
	2	1915	1456	1.54		2	1915	1456	1.54
T5C	0.8	2434	1194	1.35	T5'H	0.8	2434	1194	1.35
	1	2372	1238	1.4		1	2372	1238	1.4
	1.2	2304	1298	1.47		1.2	2304	1298	1.47
	1.4	2244	1334	1.51		1.4	2244	1334	1.51
	1.6	2169	1381	1.56		1.6	2169	1381	1.56
	1.8	2085	1434	1.62		1.8	2085	1434	1.62
	2	2006	1477	1.67		2	2006	1477	1.67

T1C AND T1'H VALUES ARE FOR FAN MODE OR PART LOAD ONLY. T2C AND T2'H VALUES ARE FOR PART LOAD ONLY

APPENDIX A BLOWER PERFORMANCE TABLES - AC

6 Ton Cooler

High Static Drive

Models: DHC0723W, DHC0724W, DHC0727W

Downflow									
Speed Tap	External Static	SCFM	RPM	BHP	Speed Tap	External Static	SCFM	RPM	BHP
T1C*	0.8	1017	899	0.3	T1'H*	0.8	2372	1195	1.32
	1	884	968	0.32		1	2299	1246	1.38
	1.2	756	1030	0.34		1.2	2224	1282	1.42
	1.4	564	1069	0.36		1.4	2160	1326	1.47
	1.6	442	1118	0.37		1.6	2092	1364	1.51
	1.8					1.8	2021	1405	1.55
	2					2	1946	1448	1.6
T2C**	0.8	1733	1033	0.68	T2'H**	0.8	2483	1234	1.48
	1	1637	1085	0.71		1	2410	1280	1.54
	1.2	1549	1139	0.75		1.2	2337	1322	1.59
	1.4	1452	1196	0.78		1.4	2290	1356	1.63
	1.6	1348	1249	0.82		1.6	2219	1392	1.67
	1.8	1245	1298	0.85		1.8	2156	1435	1.72
	2	1152	1348	0.88		2	2085	1473	1.77
T3C	0.8	2483	1234	1.48	T3'H	0.8	2585	1255	1.6
	1	2410	1280	1.54		1	2507	1302	1.66
	1.2	2337	1322	1.59		1.2	2436	1350	1.72
	1.4	2290	1356	1.63		1.4	2369	1383	1.76
	1.6	2219	1392	1.67		1.6	2320	1416	1.8
	1.8	2156	1435	1.72		1.8	2255	1454	1.85
	2	2085	1473	1.77		2	2188	1492	1.9
T4C	0.8	2585	1255	1.6	T4'H	0.8	2681	1284	1.76
	1	2507	1302	1.66		1	2601	1323	1.81
	1.2	2436	1350	1.72		1.2	2530	1372	1.88
	1.4	2369	1383	1.76		1.4	2466	1406	1.92
	1.6	2320	1416	1.8		1.6	2424	1440	1.97
	1.8	2255	1454	1.85		1.8	2356	1476	2.02
	2	2188	1492	1.9		2	2288	1500	2.05
T5C	0.8	2759	1308	1.9	T5'H	0.8	2759	1308	1.9
	1	2681	1348	1.96		1	2681	1348	1.96
	1.2	2606	1398	2.03		1.2	2606	1398	2.03
	1.4	2550	1436	2.09		1.4	2550	1436	2.09
	1.6	2485	1470	2.13		1.6	2485	1470	2.13
	1.8	2416	1509	2.19		1.8	2416	1509	2.19
	2	2346	1547	2.24		2	2346	1547	2.24

6 Ton Cooler

High Static Drive

Models: DHC0723W, DHC0724W, DHC0727W

Horizontal									
Speed Tap	External Static	SCFM	RPM	BHP	Speed Tap	External Static	SCFM	RPM	BHP
T1C*	0.8	1012	894	0.3	T1'H*	0.8	2400	1171	1.3
	1	884	966	0.32		1	2333	1220	1.35
	1.2	765	1026	0.34		1.2	2261	1271	1.41
	1.4	638	1092	0.36		1.4	2216	1317	1.46
	1.6	487	1113	0.37		1.6	2137	1372	1.52
	1.8					1.8	2053	1421	1.57
	2					2	1976	1461	1.62
T2C**	0.8	1762	1025	0.67	T2'H**	0.8	2509	1206	1.45
	1	1670	1086	0.71		1	2440	1251	1.5
	1.2	1586	1140	0.75		1.2	2370	1297	1.56
	1.4	1485	1197	0.78		1.4	2307	1348	1.62
	1.6	1384	1252	0.82		1.6	2244	1390	1.67
	1.8	1287	1306	0.85		1.8	2177	1441	1.73
	2	1198	1352	0.89		2	2092	1484	1.78
T3C	0.8	2509	1206	1.45	T3'H	0.8	2612	1231	1.57
	1	2440	1251	1.5		1	2537	1272	1.62
	1.2	2370	1297	1.56		1.2	2463	1316	1.68
	1.4	2307	1348	1.62		1.4	2420	1357	1.73
	1.6	2244	1390	1.67		1.6	2356	1397	1.78
	1.8	2177	1441	1.73		1.8	2292	1444	1.84
	2	2092	1484	1.78		2	2216	1491	1.9
T4C	0.8	2612	1231	1.57	T4'H	0.8	2712	1250	1.71
	1	2537	1272	1.62		1	2640	1288	1.76
	1.2	2463	1316	1.68		1.2	2572	1330	1.82
	1.4	2420	1357	1.73		1.4	2507	1375	1.88
	1.6	2356	1397	1.78		1.6	2440	1426	1.95
	1.8	2292	1444	1.84		1.8	2402	1460	2
	2	2216	1491	1.9		2	2288	1500	2.05
T5C	0.8	2794	1276	1.85	T5'H	0.8	2794	1276	1.85
	1	2733	1315	1.91		1	2733	1315	1.91
	1.2	2669	1358	1.97		1.2	2669	1358	1.97
	1.4	2608	1394	2.02		1.4	2608	1394	2.02
	1.6	2546	1441	2.09		1.6	2546	1441	2.09
	1.8	2497	1483	2.15		1.8	2497	1483	2.15
	2	2439	1519	2.19		2	2439	1519	2.19

T1C AND T1'H VALUES ARE FOR FAN MODE OR PART LOAD ONLY. T2C AND T2'H VALUES ARE FOR PART LOAD ONLY

APPENDIX A BLOWER PERFORMANCE TABLES - HEAT PUMP

3 Ton Heat Pump
Standard Static Drive
Models: DHH0361D and DHH0363D

Downflow				
Speed Tap	External Static	SCFM	RPM	BHP
T1*	0.2	1095	595	0.15
	0.4	975	680	0.17
	0.6	815	770	0.19
	0.8	695	845	0.21
T2**	0.2			
	0.4	1525	820	0.39
	0.6	1440	885	0.42
	0.8	1335	950	0.45
T3	0.2	1320	670	0.23
	0.4	1220	740	0.25
	0.6	1100	815	0.28
	0.8	985	890	0.3
T4	0.2	1415	700	0.27
	0.4	1315	765	0.29
	0.6	1215	840	0.32
	0.8	1100	910	0.35
T5	0.2			
	0.4			
	0.6	1565	910	0.49
	0.8	1465	970	0.52

Horizontal				
Speed Tap	External Static	SCFM	RPM	BHP
T1*	0.2	1140	585	0.14
	0.4	1015	665	0.16
	0.6	850	755	0.18
	0.8	725	830	0.2
T2**	0.2			
	0.4	1585	805	0.38
	0.6	1500	865	0.41
	0.8	1390	930	0.44
T3	0.2	1375	655	0.22
	0.4	1270	725	0.25
	0.6	1145	800	0.27
	0.8	1025	870	0.3
T4	0.2	1470	685	0.26
	0.4	1370	750	0.29
	0.6	1265	825	0.31
	0.8	1145	890	0.34
T5	0.2			
	0.4			
	0.6	1600	890	0.48
	0.8	1525	955	0.51

Downflow				
Speed Tap	External Static	SCFM	RPM	BHP
T1*	0.2	1125	585	0.14
	0.4	1005	670	0.16
	0.6	840	765	0.19
	0.8	715	850	0.21
T2**	0.2	1415	660	0.24
	0.4	1310	740	0.26
	0.6	1200	815	0.29
	0.8	1085	890	0.32
T3	0.2	1370	650	0.22
	0.4	1265	730	0.25
	0.6	1145	805	0.27
	0.8	1030	885	0.3
T4	0.2	1415	660	0.24
	0.4	1310	740	0.26
	0.6	1200	815	0.29
	0.8	1085	890	0.32
T5	0.2			
	0.4	1565	800	0.36
	0.6	1485	860	0.39
	0.8	1390	930	0.43

Horizontal				
Speed Tap	External Static	SCFM	RPM	BHP
T1*	0.2	1150	575	0.14
	0.4	1025	655	0.16
	0.6	855	750	0.18
	0.8	730	835	0.2
T2**	0.2	1445	645	0.23
	0.4	1335	725	0.26
	0.6	1225	800	0.29
	0.8	1105	870	0.31
T3	0.2	1395	635	0.22
	0.4	1290	715	0.24
	0.6	1170	790	0.27
	0.8	1050	865	0.29
T4	0.2	1445	645	0.23
	0.4	1335	725	0.26
	0.6	1225	800	0.29
	0.8	1105	870	0.31
T5	0.2			
	0.4	1595	785	0.35
	0.6	1510	845	0.39
	0.8	1420	910	0.42

T1 VALUES ARE FOR FAN MODE OR PART LOAD ONLY. T2 VALUES ARE FOR PART LOAD ONLY

APPENDIX A BLOWER PERFORMANCE TABLES - HEAT PUMP

4 Ton Heat Pump
Standard Static Drive
Models: DHH0481D and DHH0483D

Downflow				
Speed Tap	External Static	SCFM	RPM	BHP
T1*	0.2	1070	605	0.14
	0.4	940	695	0.17
	0.6	795	775	0.18
	0.8	660	845	0.2
T2**	0.2	1930	870	0.58
	0.4	1840	925	0.62
	0.6	1760	980	0.65
	0.8	1675	1040	0.69
T3	0.2	1670	785	0.41
	0.4	1570	850	0.44
	0.6	1475	915	0.47
	0.8	1380	980	0.51
T4	0.2	1930	870	0.58
	0.4	1840	925	0.62
	0.6	1760	980	0.65
	0.8	1675	1040	0.69
T5	0.2	2075	915	0.7
	0.4	1990	965	0.73
	0.6	1915	1020	0.78
	0.8	1835	1075	0.82

Horizontal				
Speed Tap	External Static	SCFM	RPM	BHP
T1*	0.2	1080	600	0.14
	0.4	950	690	0.16
	0.6	805	765	0.18
	0.8	665	835	0.2
T2**	0.2	1950	860	0.57
	0.4	1860	915	0.61
	0.6	1780	970	0.65
	0.8	1690	1030	0.69
T3	0.2	1685	775	0.4
	0.4	1585	840	0.43
	0.6	1490	905	0.47
	0.8	1395	970	0.5
T4	0.2	1950	860	0.57
	0.4	1860	915	0.61
	0.6	1780	970	0.65
	0.8	1690	1030	0.69
T5	0.2	2095	905	0.69
	0.4	2010	955	0.73
	0.6	1935	1010	0.77
	0.8	1855	1065	0.81

Downflow				
Speed Tap	External Static	SCFM	RPM	BHP
T1*	0.2	1090	580	0.14
	0.4	960	675	0.16
	0.6	795	770	0.18
	0.8	675	845	0.2
T2**	0.2	1790	790	0.43
	0.4	1705	850	0.47
	0.6	1615	910	0.5
	0.8	1525	970	0.53
T3	0.2	1730	775	0.4
	0.4	1645	835	0.43
	0.6	1550	895	0.46
	0.8	1455	960	0.5
T4	0.2	1790	790	0.43
	0.4	1705	850	0.47
	0.6	1615	910	0.5
	0.8	1525	970	0.53
T5	0.2	1900	830	0.5
	0.4	1825	880	0.53
	0.6	1740	935	0.57
	0.8	1655	995	0.6

Horizontal				
Speed Tap	External Static	SCFM	RPM	BHP
T1*	0.2	1125	565	0.13
	0.4	990	655	0.16
	0.6	820	745	0.18
	0.8	695	820	0.2
T2**	0.2	1845	765	0.42
	0.4	1755	825	0.45
	0.6	1665	885	0.48
	0.8	1570	940	0.51
T3	0.2	1780	750	0.39
	0.4	1685	810	0.42
	0.6	1595	870	0.45
	0.8	1500	930	0.48
T4	0.2	1845	765	0.42
	0.4	1755	825	0.45
	0.6	1665	885	0.48
	0.8	1570	940	0.51
T5	0.2	1955	805	0.49
	0.4	1880	855	0.52
	0.6	1790	905	0.55
	0.8	1705	965	0.59

T1 VALUES ARE FOR FAN MODE OR PART LOAD ONLY. T2 VALUES ARE FOR PART LOAD ONLY

APPENDIX A BLOWER PERFORMANCE TABLES - HEAT PUMP

5 Ton Heat Pump
Standard Static Drive
Models: DHH0601D and DHH0603D

Downflow				
Speed Tap	External Static	SCFM	RPM	BHP
T1*	0.2	1335	650	0.22
	0.4	1220	730	0.24
	0.6	1090	820	0.27
	0.8	975	890	0.3
T2**	0.2	2045	885	0.64
	0.4	1970	930	0.67
	0.6	1890	980	0.71
	0.8	1800	1040	0.75
T3	0.2	2035	880	0.63
	0.4	1955	925	0.66
	0.6	1875	975	0.7
	0.8	1785	1040	0.74
T4	0.2	2280	965	0.86
	0.4	2205	1010	0.9
	0.6	2130	1055	0.94
	0.8	2050	1105	0.99
T5	0.2	2345	990	0.94
	0.4	2270	1035	0.99
	0.6	2195	1080	1.03
	0.8	2120	1125	1.07

Horizontal				
Speed Tap	External Static	SCFM	RPM	BHP
T1*	0.2	1350	655	0.22
	0.4	1230	735	0.24
	0.6	1100	830	0.28
	0.8	985	900	0.3
T2**	0.2	2065	895	0.65
	0.4	1990	940	0.68
	0.6	1910	990	0.72
	0.8	1820	1050	0.76
T3	0.2	2055	890	0.64
	0.4	1975	935	0.67
	0.6	1895	985	0.7
	0.8	1805	1050	0.75
T4	0.2	2305	975	0.87
	0.4	2225	1020	0.91
	0.6	2150	1065	0.95
	0.8	2070	1115	1
T5	0.2	2370	1000	0.95
	0.4	2295	1045	0.99
	0.6	2215	1090	1.04
	0.8	2140	1135	1.08

Downflow				
Speed Tap	External Static	SCFM	RPM	BHP
T1*	0.2	1340	640	0.21
	0.4	1230	720	0.24
	0.6	1115	800	0.27
	0.8	985	880	0.29
T2**	0.2	1970	825	0.53
	0.4	1880	880	0.57
	0.6	1790	940	0.6
	0.8	1715	995	0.64
T3	0.2	2100	865	0.62
	0.4	2010	915	0.65
	0.6	1925	970	0.69
	0.8	1855	1025	0.73
T4	0.2	2055	850	0.59
	0.4	1965	905	0.62
	0.6	1880	960	0.66
	0.8	1810	1015	0.7
T5	0.2	2175	890	0.67
	0.4	2085	940	0.7
	0.6	2005	990	0.74
	0.8	1940	1040	0.78

Horizontal				
Speed Tap	External Static	SCFM	RPM	BHP
T1*	0.2	1365	620	0.21
	0.4	1255	700	0.23
	0.6	1135	775	0.26
	0.8	1005	855	0.28
T2**	0.2	2010	800	0.51
	0.4	1920	855	0.55
	0.6	1825	910	0.58
	0.8	1750	965	0.62
T3	0.2	2140	840	0.6
	0.4	2050	890	0.64
	0.6	1965	940	0.67
	0.8	1890	995	0.71
T4	0.2	2095	825	0.57
	0.4	2005	880	0.61
	0.6	1920	930	0.64
	0.8	1845	985	0.68
T5	0.2	2220	865	0.65
	0.4	2125	910	0.69
	0.6	2050	960	0.72
	0.8	1975	1010	0.76

T1 VALUES ARE FOR FAN MODE OR PART LOAD ONLY. T2 VALUES ARE FOR PART LOAD ONLY

APPENDIX A BLOWER PERFORMANCE TABLES - HEAT PUMP

6 Ton Heat Pump

Standard Static Drive

Models: DHH0723D, DHH0724D, and DHH0727D

Downflow				
Speed Tap	External Static	SCFM	RPM	BHP
T1*	0.2	1394	635	0.21
	0.4	1265	711	0.24
	0.6	1127	805	0.27
	0.8	983	885	0.29
T2**	0.2	2301	832	0.77
	0.4	2229	882	0.82
	0.6	2156	929	0.86
	0.8	2083	979	0.91
T3	0.2	2226	882	0.69
	0.4	2143	931	0.72
	0.6	2052	973	0.75
	0.8	1950	1027	0.79
T4	0.2	2301	903	0.84
	0.4	2229	935	0.87
	0.6	2156	987	0.92
	0.8	2083	1034	0.96
T5	0.2	2435	972	0.93
	0.4	2362	1007	0.96
	0.6	2293	1043	0.99
	0.8	2209	1083	1.03

Horizontal				
Speed Tap	External Static	SCFM	RPM	BHP
T1*	0.2	1382	642	0.21
	0.4	1259	724	0.24
	0.6	1160	799	0.27
	0.8	1016	879	0.29
T2**	0.2	2348	926	0.86
	0.4	2274	973	0.9
	0.6	2200	1020	0.95
	0.8	2126	1066	0.99
T3	0.2	2211	885	0.68
	0.4	2128	938	0.73
	0.6	2034	988	0.76
	0.8	1950	1042	0.81
T4	0.2	2348	926	0.86
	0.4	2274	973	0.9
	0.6	2200	1020	0.95
	0.8	2126	1066	0.99
T5	0.2	2404	961	0.91
	0.4	2347	995	0.95
	0.6	2273	1050	1
	0.8	2193	1100	1.05

T1 VALUES ARE FOR FAN MODE OR PART LOAD ONLY. T2 VALUES ARE FOR PART LOAD ONLY

APPENDIX A BLOWER PERFORMANCE TABLES - HEAT PUMP

3 Ton Heat Pump

High Static Drive

Models: DHH0363W, DHH0364W, DHH0367W

Downflow									
Speed Tap	External Static	SCFM	RPM	BHP	Speed Tap	External Static	SCFM	RPM	BHP
T1C*	0.8	396	743	0.15	T1'H*	0.8	1397	886	0.46
	1	218	780	0.16		1	1275	956	0.5
	1.2					1.2	1173	1009	0.53
	1.4					1.4	1087	1054	0.55
	1.6					1.6	991	1104	0.58
	1.8					1.8	914	1145	0.6
	2					2	831	1187	0.62
T2C*	0.8	806	805	0.24	T2'H*	0.8	1490	921	0.52
	1	712	865	0.26		1	1399	969	0.55
	1.2	574	923	0.27		1.2	1287	1023	0.58
	1.4	428	969	0.29		1.4	1191	1072	0.61
	1.6					1.6	1111	1117	0.64
	1.8					1.8	1020	1164	0.67
	2					2	948	1207	0.69
T3C	0.8	1397	886	0.46	T3'H	0.8	1567	929	0.6
	1	1275	956	0.5		1	1476	977	0.62
	1.2	1173	1009	0.53		1.2	1365	1039	0.66
	1.4	1087	1054	0.55		1.4	1274	1084	0.68
	1.6	991	1104	0.58		1.6	1186	1129	0.71
	1.8	914	1148	0.6		1.8	1103	1175	0.74
	2	831	1187	0.62		2	1019	1219	0.77
T4C	0.8	1567	929	0.6	T4'H	0.8	1600	958	0.66
	1	1476	977	0.62		1	1522	1003	0.69
	1.2	1365	1039	0.66		1.2	1438	1048	0.72
	1.4	1274	1084	0.68		1.4	1348	1099	0.76
	1.6	1186	1129	0.71		1.6	1260	1143	0.79
	1.8	1103	1175	0.74		1.8	1188	1184	0.82
	2	1019	1219	0.77		2	1100	1228	0.85
T5C	0.8				T5'H	0.8			
	1	1600	1030	0.76		1			
	1.2	1528	1071	0.79		1.2			
	1.4	1439	1112	0.82		1.4	1600	1145	0.97
	1.6	1358	1157	0.85		1.6	1545	1185	1
	1.8	1279	1195	0.88		1.8	1470	1220	1.03
	2	1174	1233	0.91		2	1360	1260	1.07

3 Ton Heat Pump

High Static Drive

Models: DHH0363W, DHH0364W, DHH0367W

Horizontal									
Speed Tap	External Static	SCFM	RPM	BHP	Speed Tap	External Static	SCFM	RPM	BHP
T1C*	0.8	404	790	0.16	T1'H*	0.8	1426	941	0.49
	1	222	830	0.17		1	1301	1016	0.53
	1.2					1.2	1197	1072	0.56
	1.4					1.4	1109	1120	0.59
	1.6					1.6	1011	1173	0.61
	1.8					1.8	933	1220	0.64
	2					2	848	1261	0.66
T2C*	0.8	824	855	0.25	T2'H*	0.8	1520	980	0.56
	1	727	920	0.27		1	1428	1030	0.59
	1.2	586	982	0.29		1.2	1313	1087	0.62
	1.4	437	1030	0.31		1.4	1215	1139	0.65
	1.6					1.6	1134	1187	0.68
	1.8					1.8	1041	1237	0.71
	2					2	967	1282	0.73
T3C	0.8	1426	941	0.49	T3'H	0.8	1570	1009	0.64
	1	1301	1016	0.53		1	1482	1056	0.67
	1.2	1197	1072	0.56		1.2	1393	1104	0.7
	1.4	1109	1120	0.59		1.4	1300	1152	0.73
	1.6	1011	1173	0.61		1.6	1210	1200	0.76
	1.8	933	1220	0.64		1.8	1126	1248	0.79
	2	848	1261	0.66		2	1040	1295	0.82
T4C	0.8	1570	1009	0.64	T4'H	0.8			
	1	1482	1056	0.67		1	1554	1066	0.74
	1.2	1393	1104	0.7		1.2	1467	1114	0.77
	1.4	1300	1152	0.73		1.4	1375	1168	0.81
	1.6	1210	1200	0.76		1.6	1286	1214	0.84
	1.8	1126	1248	0.79		1.8	1212	1258	0.87
	2	1040	1295	0.82		2	1122	1305	0.9
T5C	0.8				T5'H	0.8			
	1					1			
	1.2	1558	1138	0.84		1.2			
	1.4	1468	1181	0.87		1.4			
	1.6	1386	1229	0.91		1.6	1565	1260	1.07
	1.8	1305	1270	0.94		1.8	1500	1295	1.1
	2	1198	1310	0.97		2	1380	1340	1.14

T1C AND T1'H VALUES ARE FOR FAN MODE OR PART LOAD ONLY. T2C AND T2'H VALUES ARE FOR PART LOAD ONLY

APPENDIX A BLOWER PERFORMANCE TABLES - HEAT PUMP

4 Ton Heat Pump

High Static Drive

Models: DHH0483W, DHH0484W, DHH0487W

Downflow									
Speed Tap	External Static	SCFM	RPM	BHP	Speed Tap	External Static	SCFM	RPM	BHP
T1C*	0.8	602	773	0.17	T1'H*	0.8	1730	929	0.63
	1	456	837	0.18		1	1653	976	0.66
	1.2	350	885	0.19		1.2	1575	1028	0.7
	1.4					1.4	1445	1095	0.74
	1.6					1.6	1343	1148	0.78
	1.8					1.8	1255	1191	0.81
	2					2	1181	1233	0.84
T2C*	0.8	1337	851	0.36	T2'H*	0.8	1819	951	0.71
	1	1189	932	0.4		1	1743	993	0.74
	1.2	1069	991	0.42		1.2	1670	1038	0.78
	1.4	989	1072	0.45		1.4	1568	1092	0.82
	1.6	1056	827	0.35		1.6	1448	1154	0.87
	1.8					1.8	1354	1201	0.9
	2					2	1293	1228	0.92
T3C	0.8	1730	929	0.63	T3'H	0.8	1894	968	0.79
	1	1653	976	0.66		1	1823	1009	0.83
	1.2	1575	1028	0.7		1.2	1749	1056	0.87
	1.4	1445	1095	0.74		1.4	1661	1102	0.9
	1.6	1343	1148	0.78		1.6	1537	1167	0.96
	1.8	1255	1191	0.81		1.8	1435	1218	1
	2	1181	1233	0.84		2	1348	1261	1.04
T4C	0.8	1894	968	0.79	T4'H	0.8	1964	988	0.87
	1	1823	1009	0.83		1	1896	1024	0.9
	1.2	1749	1056	0.87		1.2	1823	1068	0.94
	1.4	1661	1102	0.9		1.4	1744	1115	0.98
	1.6	1537	1167	0.96		1.6	1645	1172	1.03
	1.8	1435	1218	1		1.8	1523	1233	1.09
	2	1348	1261	1.04		2	1434	1274	1.12
T5C	0.8	2132	1005	0.95	T5'H	0.8	2132	1005	0.95
	1	2043	1052	1		1	2043	1052	1
	1.2	1971	1092	1.04		1.2	1971	1092	1.04
	1.4	1901	1137	1.08		1.4	1901	1137	1.08
	1.6	1821	1180	1.12		1.6	1821	1180	1.12
	1.8	1706	1243	1.18		1.8	1706	1243	1.18
	2	1602	1289	1.23		2	1602	1289	1.23

4 Ton Heat Pump

High Static Drive

Models: DHH0483W, DHH0484W, DHH0487W

Horizontal									
Speed Tap	External Static	SCFM	RPM	BHP	Speed Tap	External Static	SCFM	RPM	BHP
T1C*	0.8	614	822	0.18	T1'H*	0.8	1765	987	0.67
	1	465	890	0.19		1	1687	1037	0.7
	1.2	357	941	0.2		1.2	1607	1092	0.74
	1.4					1.4	1475	1163	0.79
	1.6					1.6	1371	1220	0.83
	1.8					1.8	1281	1265	0.86
	2					2	1206	1310	0.89
T2C*	0.8	1364	904	0.39	T2'H*	0.8	1856	1010	0.76
	1	1213	990	0.42		1	1779	1055	0.79
	1.2	1091	1053	0.45		1.2	1704	1103	0.83
	1.4	1010	1107	0.47		1.4	1600	1160	0.87
	1.6	1161	880	0.38		1.6	1477	1226	0.92
	1.8					1.8	1382	1276	0.96
	2					2	1320	1305	0.98
T3C	0.8	1765	987	0.67	T3'H	0.8	1933	1028	0.84
	1	1687	1037	0.7		1	1860	1072	0.88
	1.2	1607	1092	0.74		1.2	1785	1122	0.92
	1.4	1475	1163	0.79		1.4	1695	1171	0.96
	1.6	1371	1220	0.83		1.6	1569	1240	1.02
	1.8	1281	1265	0.86		1.8	1464	1294	1.06
	2	1206	1310	0.89		2	1376	1340	1.1
T4C	0.8	1933	1028	0.84	T4'H	0.8	2030	1035	0.92
	1	1860	1072	0.88		1	1935	1088	0.96
	1.2	1785	1122	0.92		1.2	1860	1135	1
	1.4	1695	1171	0.96		1.4	1780	1185	1.04
	1.6	1569	1240	1.02		1.6	1679	1245	1.1
	1.8	1464	1294	1.06		1.8	1554	1310	1.15
	2	1376	1340	1.1		2	1463	1354	1.19
T5C	0.8	1823	1054	1.01	T5'H	0.8	1823	1054	1.01
	1	1916	1107	1.05		1	1916	1107	1.05
	1.2	2010	1160	1.1		1.2	2010	1160	1.1
	1.4	1939	1208	1.15		1.4	1939	1208	1.15
	1.6	1857	1254	1.19		1.6	1857	1254	1.19
	1.8	1739	1321	1.26		1.8	1739	1321	1.26
	2	1636	1370	1.3		2	1634	1370	1.3

T1C AND T1'H VALUES ARE FOR FAN MODE OR PART LOAD ONLY. T2C AND T2'H VALUES ARE FOR PART LOAD ONLY

APPENDIX A BLOWER PERFORMANCE TABLES - HEAT PUMP

5 Ton Heat Pump

High Static Drive

Models: DHH0603W, DHH0604W, DHH0607W

Downflow									
Speed Tap	External Static	SCFM	RPM	BHP	Speed Tap	External Static	SCFM	RPM	BHP
T1C*	0.8	737	726	0.17	T1'H*	0.8	2034	1035	0.89
	1	585	802	0.19		1	1961	1087	0.93
	1.2	393	834	0.2		1.2	1900	1134	0.97
	1.4					1.4	1797	1193	1.02
	1.6					1.6	1715	1240	1.06
	1.8					1.8	1627	1285	1.1
	2					2	1544	1327	1.14
T2C*	0.8	1538	935	0.56	T2'H*	0.8	2135	1058	0.97
	1	1429	996	0.59		1	2067	1110	1.02
	1.2	1328	1052	0.63		1.2	2010	1148	1.05
	1.4	1235	1105	0.66		1.4	1906	1209	1.11
	1.6	1135	1154	0.69		1.6	1829	1257	1.15
	1.8	1048	1202	0.72		1.8	1747	1299	1.19
	2	965	1245	0.74		2	1664	1343	1.23
T3C	0.8	2135	1058	0.97	T3'H	0.8	2232	1083	1.07
	1	2067	1110	1.02		1	2158	1127	1.11
	1.2	2010	1148	1.05		1.2	2108	1171	1.16
	1.4	1906	1209	1.11		1.4	2015	1227	1.21
	1.6	1829	1257	1.15		1.6	1931	1278	1.26
	1.8	1747	1299	1.19		1.8	1853	1320	1.3
	2	1664	1343	1.23		2	1767	1358	1.34
T4C	0.8	2302	1099	1.16	T4'H	0.8	2302	1099	1.16
	1	2243	1141	1.21		1	2243	1141	1.21
	1.2	2164	1194	1.26		1.2	2164	1194	1.26
	1.4	2123	1232	1.3		1.4	2123	1232	1.3
	1.6	2028	1286	1.36		1.6	2028	1286	1.36
	1.8	1922	1328	1.41		1.8	1922	1328	1.41
	2	1877	1370	1.45		2	1877	1370	1.45
T5C	0.8	2385	1124	1.27	T5'H	0.8	2385	1124	1.27
	1	2324	1165	1.32		1	2324	1165	1.32
	1.2	2258	1222	1.38		1.2	2258	1222	1.38
	1.4	2199	1256	1.42		1.4	2199	1256	1.42
	1.6	2126	1300	1.47		1.6	2126	1300	1.47
	1.8	2043	1350	1.53		1.8	2043	1350	1.53
	2	1901	1390	1.57		2	1901	1390	1.57

5 Ton Heat Pump

High Static Drive

Models: DHH0603W, DHH0604W, DHH0607W

Horizontal									
Speed Tap	External Static	SCFM	RPM	BHP	Speed Tap	External Static	SCFM	RPM	BHP
T1C*	0.8	752	772	0.18	T1'H*	0.8	2075	1100	0.94
	1	597	853	0.2		1	2001	1155	0.99
	1.2	401	888	0.21		1.2	1939	1205	1.03
	1.4					1.4	1833	1268	1.09
	1.6					1.6	1750	1318	1.13
	1.8					1.8	1660	1365	1.17
	2					2	1575	1410	1.21
T2C*	0.8	1569	993	0.59	T2'H*	0.8	2179	1124	1.03
	1	1458	1058	0.63		1	2110	1179	1.08
	1.2	1355	1118	0.66		1.2	2051	1220	1.12
	1.4	1260	1174	0.7		1.4	1945	1285	1.18
	1.6	1158	1228	0.73		1.6	1867	1336	1.22
	1.8	1069	1279	0.76		1.8	1783	1380	1.26
	2	985	1324	0.79		2	1698	1427	1.31
T3C	0.8	2179	1124	1.03	T3'H	0.8	2277	1151	1.14
	1	1220	1179	1.08		1	2202	1197	1.18
	1.2	2051	1220	1.12		1.2	2151	1245	1.23
	1.4	1945	1285	1.18		1.4	2056	1304	1.29
	1.6	1867	1336	1.22		1.6	1970	1358	1.34
	1.8	1783	1380	1.26		1.8	1891	1403	1.39
	2	1698	1427	1.31		2	1803	1443	1.43
T4C	0.8	2349	1168	1.24	T4'H	0.8	2349	1168	1.24
	1	2289	1212	1.28		1	2289	1212	1.28
	1.2	2209	1268	1.34		1.2	2209	1268	1.34
	1.4	2166	1309	1.39		1.4	2166	1309	1.39
	1.6	2069	1366	1.45		1.6	2069	1366	1.45
	1.8	1961	1411	1.49		1.8	1961	1411	1.49
	2	1915	1456	1.54		2	1915	1456	1.54
T5C	0.8	2434	1194	1.35	T5'H	0.8	2434	1194	1.35
	1	2372	1238	1.4		1	2372	1238	1.4
	1.2	2304	1298	1.47		1.2	2304	1298	1.47
	1.4	2244	1334	1.51		1.4	2244	1334	1.51
	1.6	2169	1381	1.56		1.6	2169	1381	1.56
	1.8	2085	1434	1.62		1.8	2085	1434	1.62
	2	1940	1477	1.67		2	1940	1477	1.67

T1C AND T1'H VALUES ARE FOR FAN MODE OR PART LOAD ONLY. T2C AND T2'H VALUES ARE FOR PART LOAD ONLY

APPENDIX A BLOWER PERFORMANCE TABLES - HEAT PUMP

6 Ton Heat Pump

High Static Drive

Models: DHH0723W, DHH0724W, DHH0727W

Downflow									
Speed Tap	External Static	SCFM	RPM	BHP	Speed Tap	External Static	SCFM	RPM	BHP
T1C*	0.8	1017	899	0.3	T1'H*	0.8	2372	1195	1.32
	1	884	968	0.32		1	2299	1246	1.38
	1.2	745	1030	0.34		1.2	2224	1282	1.42
	1.4	564	1069	0.36		1.4	2160	1326	1.47
	1.6	442	1118	0.37		1.6	2092	1364	1.51
	1.8					1.8	2021	1405	1.55
	2					2	1946	1448	1.6
T2C**	0.8	1925	1088	0.84	T2'H**	0.8	2483	1234	1.48
	1	1848	1131	0.88		1	2410	1280	1.54
	1.2	1762	1182	0.91		1.2	2337	1322	1.57
	1.4	1675	1230	0.95		1.4	2290	1356	1.63
	1.6	1584	1282	0.99		1.6	2219	1392	1.67
	1.8	1486	1332	1.03		1.8	2156	1435	1.72
	2	1399	1379	1.07		2	2085	1473	1.77
T3C	0.8	2483	1234	1.48	T3'H	0.8	2585	1255	1.6
	1	2410	1280	1.54		1	2507	1302	1.66
	1.2	2337	1322	1.59		1.2	2436	1350	1.72
	1.4	2290	1356	1.63		1.4	2369	1383	1.76
	1.6	2219	1392	1.67		1.6	2320	1416	1.8
	1.8	2156	1435	1.72		1.8	2255	1454	1.85
	2	2085	1473	1.77		2	2188	1492	1.9
T4C	0.8	2585	1255	1.6	T4'H	0.8	2681	1284	1.76
	1	2507	1302	1.66		1	2601	1323	1.81
	1.2	2436	1350	1.72		1.2	2530	1372	1.88
	1.4	2369	1383	1.76		1.4	2466	1406	1.92
	1.6	2320	1416	1.8		1.6	2424	1440	1.97
	1.8	2255	1454	1.85		1.8	2356	1476	2.02
	2	2188	1492	1.9		2	2288	1514	2.07
T5C	0.8	2759	1308	1.9	T5'H	0.8	2759	1308	1.9
	1	2681	1348	1.96		1	2681	1348	1.96
	1.2	2606	1398	2.03		1.2	2606	1398	2.03
	1.4	2550	1436	2.09		1.4	2550	1436	2.09
	1.6	2485	1470	2.13		1.6	2485	1470	2.13
	1.8	2416	1509	2.18		1.8	2416	1509	2.18
	2	2346	1547	2.24		2	2346	1547	2.24

6 Ton Heat Pump

High Static Drive

Models: DHH0723W, DHH0724W, DHH0727W

Horizontal									
Speed Tap	External Static	SCFM	RPM	BHP	Speed Tap	External Static	SCFM	RPM	BHP
T1C*	0.8	1012	894	0.3	T1'H*	0.8	2400	1171	1.3
	1	884	966	0.32		1	2333	1220	1.35
	1.2	765	1026	0.34		1.2	2261	1271	1.41
	1.4	638	1092	0.36		1.4	2216	1317	1.46
	1.6	487	1113	0.37		1.6	2137	1372	1.52
	1.8					1.8	2053	1421	1.57
	2					2	1976	1464	1.62
T2C**	0.8	1966	1062	0.82	T2'H**	0.8	2509	1206	1.45
	1	1891	1128	0.87		1	2440	1251	1.5
	1.2	1803	1184	0.92		1.2	2370	1297	1.56
	1.4	1716	1234	0.95		1.4	2307	1348	1.62
	1.6	1627	1283	0.99		1.6	2244	1390	1.67
	1.8	1532	1336	1.03		1.8	2177	1441	1.73
	2	1442	1386	1.07		2	2092	1484	1.78
T3C	0.8	2509	1206	1.45	T3'H	0.8	2612	1231	1.57
	1	2440	1251	1.5		1	2537	1272	1.62
	1.2	2370	1297	1.56		1.2	2463	1316	1.68
	1.4	2307	1348	1.62		1.4	2420	1357	1.73
	1.6	2244	1390	1.67		1.6	2356	1397	1.78
	1.8	2177	1441	1.73		1.8	2292	1444	1.84
	2	2092	1484	1.78		2	2216	1491	1.9
T4C	0.8	2612	1231	1.57	T4'H	0.8	2712	1250	1.71
	1	2537	1272	1.62		1	2640	1288	1.76
	1.2	2463	1316	1.68		1.2	2572	1330	1.82
	1.4	2420	1357	1.73		1.4	2507	1375	1.88
	1.6	2356	1397	1.78		1.6	2440	1426	1.95
	1.8	2292	1444	1.84		1.8	2402	1460	2
	2	2216	1491	1.9		2	2343	1498	2.05
T5C	0.8	2794	1276	1.85	T5'H	0.8	2794	1276	1.85
	1	2733	1315	1.91		1	2733	1315	1.91
	1.2	2669	1358	1.97		1.2	2669	1358	1.97
	1.4	2608	1394	2.02		1.4	2608	1394	2.02
	1.6	2546	1441	2.09		1.6	2546	1441	2.09
	1.8	2497	1483	2.15		1.8	2497	1483	2.15
	2	2439	1519	2.2		2	2439	1519	2.2

T1C AND T1'H VALUES ARE FOR FAN MODE OR PART LOAD ONLY. T2C AND T2'H VALUES ARE FOR PART LOAD ONLY

APPENDIX A BLOWER PERFORMANCE DATA -AC & HP

THE FOLLOWING TABLES ARE PROVIDED FOR REFERENCE ONLY TO SHOW DDC CONTROL SETTINGS RELATIONSHIP TO UNIT CFM. BLOWER SPEED SETTINGS MUST BE SET TO MEET THE MINIMUM REQUIRED CFM OF THEIR STAGES.

3 TON

MODELS : DHC0363D,DHC0364D & DHC0367D WITH DDC CONTROL

STANDARD STATIC

DOWN FLOW

CFM	0.2			0.4			0.6			0.8			1.0		
	RPM	DDC %	BHP	RPM	DDC %	BHP	RPM	DDC %	BHP	RPM	DDC %	BHP	RPM	DDC %	BHP
600				621	25	0.11	739	30	0.16	812	34	0.20	879	33	0.25
800	494	25	0.09	656	31	0.14	771	35	0.20	854	39	0.26	927	40	0.32
1000	549	31	0.12	691	36	0.19	802	40	0.25	895	44	0.34	975	47	0.41
1200	605	36	0.17	726	41	0.24	833	45	0.32	937	49	0.43	1023	53	0.52
1400	660	42	0.24	760	47	0.31	865	50	0.41	978	54	0.56	1071	60	0.66
1500	688	45	0.29	778	49	0.35	881	53	0.46	999	56	0.64	1095	63	0.74

Shaded area indicates air flow below 900 SCFM (300 SCFM/ton) that is not recommended for High Stage cooling or heating.

Valid motor operating range for DDC% setting is 20 - 90.

HORIZONTAL FLOW

CFM	0.2			0.4			0.6			0.8			1.0		
	RPM	DDC %	BHP	RPM	DDC %	BHP	RPM	DDC %	BHP	RPM	DDC %	BHP	RPM	DDC %	BHP
600				627	26	0.11	743	31	0.16	840	34	0.21	930	40	0.26
800	497	22	0.08	660	31	0.14	772	35	0.20	871	39	0.26	957	43	0.32
1000	550	31	0.12	693	36	0.19	801	40	0.25	902	44	0.33	984	47	0.39
1200	604	39	0.17	726	41	0.25	830	45	0.32	933	49	0.42	1011	50	0.47
1400	658	48	0.25	759	46	0.33	859	50	0.41	964	53	0.54	1038	53	0.58
1500	684	52	0.29	775	49	0.38	874	52	0.46	980	56	0.60	1052	55	0.64

Shaded area indicates air flow below 900 SCFM (300 SCFM/ton) that is not recommended for High Stage cooling or heating.

Valid motor operating range for DDC% setting is 20 - 90.

3 TON

MODELS : DHC0363W,DHC0364W & DHC0367W WITH DDC CONTROL

HIGH STATIC

DOWN FLOW

CFM	0.2			0.4			0.6			0.8			1.0		
	RPM	DDC %	BHP	RPM	DDC %	BHP	RPM	DDC %	BHP	RPM	DDC %	BHP	RPM	DDC %	BHP
600				632	26	0.11	742	29	0.15	839	33	0.20	930	36	0.27
800	497	24	0.08	661	30	0.14	774	34	0.20	869	39	0.25	963	42	0.34
1000	550	30	0.12	690	35	0.18	806	39	0.27	898	44	0.31	996	48	0.42
1200	604	36	0.17	719	39	0.24	839	44	0.35	928	49	0.38	1029	54	0.52
1400	658	42	0.25	748	44	0.32	871	48	0.47	958	55	0.48	1062	60	0.65
1500	684	45	0.29	763	46	0.37	887	51	0.54	972	57	0.53	1079	63	0.73
CFM	1.2			1.4			1.6			1.8			2.0		
	RPM	DDC %	BHP	RPM	DDC %	BHP	RPM	DDC %	BHP	RPM	DDC %	BHP	RPM	DDC %	BHP
600	1008	43	0.34	1056	38	0.39	1139	43	0.48	1222	48	0.57	1288	51	0.62
800	1038	48	0.41	1093	46	0.48	1171	50	0.58	1246	55	0.67	1309	58	0.72
1000	1069	52	0.49	1130	53	0.58	1203	58	0.69	1270	62	0.78	1330	65	0.82
1200	1100	57	0.59	1166	61	0.71	1235	65	0.83	1294	68	0.92	1351	72	0.95
1400	1130	61	0.71	1203	69	0.87	1267	73	0.99	1318	75	1.08	1372	79	1.09
1500	1146	64	0.77	1222	73	0.96	1283	76	1.08	1330	79	1.17	1382	82	1.17

Shaded area indicates air flow below 900 SCFM (300 SCFM/ton) that is not recommended for High Stage cooling or heating.

Valid motor operating range for DDC% setting is 20 - 90.

HORIZONTAL FLOW

CFM	0.2			0.4			0.6			0.8			1.0		
	RPM	DDC %	BHP	RPM	DDC %	BHP	RPM	DDC %	BHP	RPM	DDC %	BHP	RPM	DDC %	BHP
600				617	26	0.11	740	30	0.15	826	32	0.20	917	36	0.26
800	494	25	0.09	656	31	0.14	769	35	0.19	860	38	0.25	950	42	0.33
1000	550	31	0.12	695	35	0.19	797	39	0.25	894	44	0.31	982	48	0.41
1200	605	37	0.18	734	40	0.25	826	44	0.31	928	50	0.39	1014	55	0.51
1400	660	42	0.26	774	45	0.33	854	49	0.40	962	56	0.49	1047	61	0.64
1500	687	45	0.31	793	47	0.37	869	51	0.45	978	59	0.55	1063	64	0.71
CFM	1.2			1.4			1.6			1.8			2.0		
	RPM	DDC %	BHP	RPM	DDC %	BHP	RPM	DDC %	BHP	RPM	DDC %	BHP	RPM	DDC %	BHP
600	996	41	0.34	1059	38	0.39	1136	42	0.45	1205	47	0.55	1256	50	0.60
800	1027	47	0.41	1090	46	0.47	1164	50	0.53	1230	55	0.65	1284	58	0.70
1000	1057	53	0.50	1122	54	0.56	1191	58	0.64	1255	62	0.78	1313	65	0.82
1200	1087	59	0.61	1154	62	0.68	1218	66	0.77	1279	70	0.94	1341	73	0.96
1400	1118	65	0.75	1185	70	0.81	1246	74	0.92	1304	77	1.12	1370	80	1.13
1500	1133	68	0.83	1201	74	0.88	1260	78	1.00	1316	81	1.17	1384	84	1.18

Shaded area indicates air flow below 900 SCFM (300 SCFM/ton) that is not recommended for High Stage cooling or heating.

Valid motor operating range for DDC% setting is 20 - 90.

APPENDIX A BLOWER PERFORMANCE DATA -AC & HP

3 TON

MODELS : DHH0363D,DHH0364D & DHH0367D WITH DDC CONTROL

STANDARD STATIC

DOWN FLOW

CFM	0.2			0.4			0.6			0.8			1.0		
	RPM	DDC %	BHP	RPM	DDC %	BHP	RPM	DDC %	BHP	RPM	DDC %	BHP	RPM	DDC %	BHP
600				574	23	0.09	687	28	0.13	774	32	0.16	844	35	0.22
800	491	25	0.08	615	29	0.12	718	33	0.17	807	36	0.21	877	39	0.27
1000	546	31	0.12	656	35	0.16	749	38	0.22	839	41	0.28	911	43	0.35
1200	601	37	0.17	697	40	0.22	781	43	0.29	871	46	0.36	944	48	0.44
1400	656	43	0.25	738	46	0.29	812	48	0.39	903	51	0.46	977	52	0.56
1500	683	46	0.30	759	48	0.34	828	50	0.45	919	53	0.53	994	54	0.64

Shaded area indicates air flow below 900 SCFM (300 SCFM/ton) that is not recommended for High Stage cooling or heating.

Valid motor operating range for DDC% setting is 20 - 90.

HORIZONTAL FLOW

CFM	0.2			0.4			0.6			0.8			1.0		
	RPM	DDC %	BHP	RPM	DDC %	BHP	RPM	DDC %	BHP	RPM	DDC %	BHP	RPM	DDC %	BHP
600				608	23	0.09	728	27	0.13	821	31	0.18	896	34	0.22
800	516	25	0.08	650	28	0.12	761	32	0.17	854	36	0.23	930	39	0.27
1000	574	30	0.12	693	34	0.17	794	37	0.22	888	41	0.30	964	43	0.34
1200	632	36	0.16	736	39	0.23	826	42	0.28	921	45	0.39	998	47	0.42
1400	690	42	0.23	779	45	0.31	859	47	0.37	954	50	0.50	1033	51	0.52
1500	719	44	0.27	800	48	0.37	876	50	0.42	971	52	0.57	1050	54	0.58

Shaded area indicates air flow below 900 SCFM (300 SCFM/ton) that is not recommended for High Stage cooling or heating.

Valid motor operating range for DDC% setting is 20 - 90.

3 TON

MODELS : DHH0363W,DHH0364W & DHH0367W WITH DDC CONTROL

HIGH STATIC

DOWN FLOW

CFM	0.2			0.4			0.6			0.8			1.0		
	RPM	DDC %	BHP	RPM	DDC %	BHP	RPM	DDC %	BHP	RPM	DDC %	BHP	RPM	DDC %	BHP
600	428	22	0.06	585	26	0.10	686	29	0.14	773	33	0.19	844	37	0.24
800	488	27	0.09	617	31	0.14	718	34	0.18	802	38	0.23	875	43	0.30
1000	547	32	0.13	649	35	0.18	749	40	0.23	830	44	0.29	907	48	0.37
1200	606	37	0.18	681	39	0.24	781	46	0.30	859	49	0.36	939	54	0.47
1400	665	42	0.27	713	43	0.32	813	52	0.38	887	54	0.45	970	59	0.58
1500	695	45	0.32	729	45	0.37	828	55	0.43	902	57	0.50	986	62	0.65
CFM	1.2			1.4			1.6			1.8			2.0		
	RPM	DDC %	BHP	RPM	DDC %	BHP	RPM	DDC %	BHP	RPM	DDC %	BHP	RPM	DDC %	BHP
600	926	37	0.27	991	41	0.34	1044	45	0.42	1109	39	0.43	1158	42	0.48
800	955	44	0.34	1019	48	0.41	1073	52	0.51	1135	49	0.54	1186	52	0.61
1000	984	51	0.42	1047	55	0.50	1103	58	0.62	1160	59	0.67	1213	63	0.78
1200	1013	58	0.53	1075	62	0.61	1133	65	0.76	1186	69	0.84	1240	74	0.99
1400	1042	65	0.66	1103	69	0.75	1163	71	0.93	1211	79	1.05	1268	84	1.17
1500	1056	68	0.74	1117	72	0.83	1177	74	1.02	1224	84	1.17	1281	89	1.19

Shaded area indicates air flow below 900 SCFM (300 SCFM/ton) that is not recommended for High Stage cooling or heating.

Valid motor operating range for DDC% setting is 20 - 90.

HORIZONTAL FLOW

CFM	0.2			0.4			0.6			0.8			1.0		
	RPM	DDC %	BHP	RPM	DDC %	BHP	RPM	DDC %	BHP	RPM	DDC %	BHP	RPM	DDC %	BHP
600	452	22	0.07	620	26	0.11	725	29	0.16	820	33	0.20	895	37	0.25
800	513	21	0.10	653	30	0.15	761	33	0.20	850	38	0.25	929	42	0.32
1000	575	32	0.14	686	34	0.19	798	38	0.25	879	43	0.31	962	47	0.39
1200	636	37	0.20	719	38	0.25	834	42	0.32	908	48	0.38	996	52	0.49
1400	697	42	0.29	752	43	0.32	870	46	0.41	938	53	0.48	1029	57	0.61
1500	728	44	0.34	768	45	0.36	888	48	0.46	953	56	0.53	1046	60	0.68
CFM	1.2			1.4			1.6			1.8			2.0		
	RPM	DDC %	BHP	RPM	DDC %	BHP	RPM	DDC %	BHP	RPM	DDC %	BHP	RPM	DDC %	BHP
600	984	36	0.29	1052	41	0.36	1108	45	0.42	1177	38	0.46	1228	41	0.48
800	1013	43	0.37	1081	47	0.44	1139	51	0.50	1204	48	0.57	1257	52	0.60
1000	1043	50	0.46	1110	54	0.54	1169	58	0.60	1230	58	0.71	1286	62	0.75
1200	1073	57	0.57	1139	61	0.66	1200	64	0.71	1257	67	0.89	1314	72	0.93
1400	1103	64	0.71	1168	68	0.80	1230	70	0.86	1283	77	1.11	1343	83	1.16
1500	1118	67	0.79	1182	71	0.89	1246	73	0.94	1297	82	1.16	1357	88	1.19

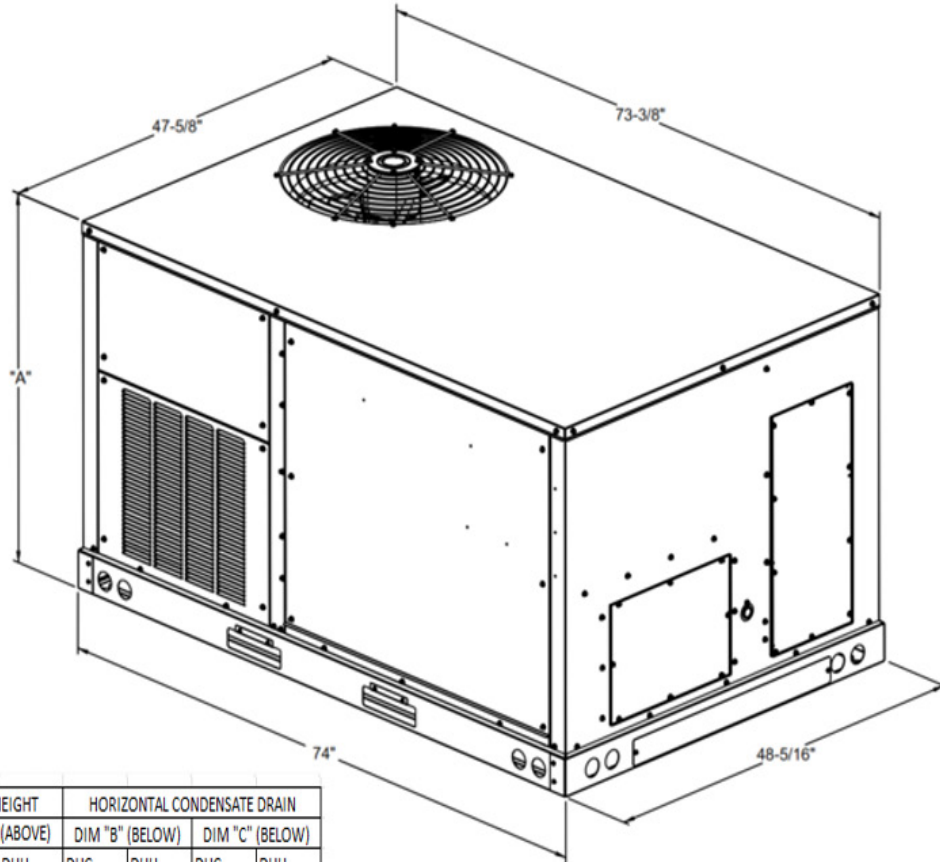
Shaded area indicates air flow below 900 SCFM (300 SCFM/ton) that is not recommended for High Stage cooling or heating.

Valid motor operating range for DDC% setting is 20 - 90.

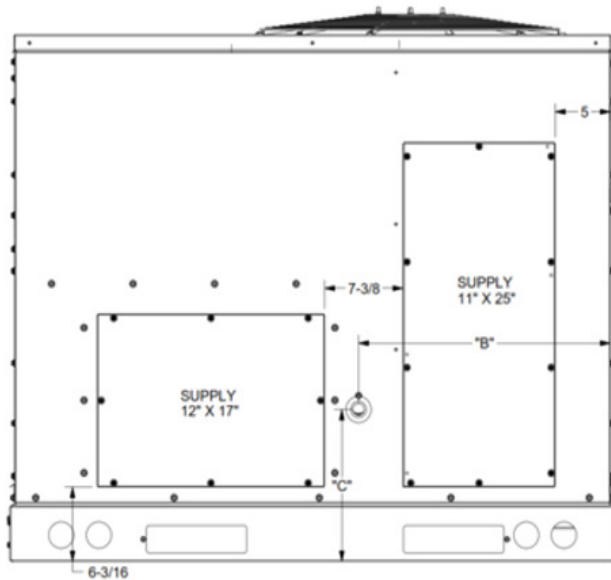
APPENDIX B ELECTRICAL DATA

Model Number	Electrical Rating	Compressor			Outdoor Fan Motor			Indoor Fan Motor			Optional Electric Heat			Optional Powered Convenience	Optional Power Exhaust	Power Supply	
		QTY	RLA	LRA	QTY	HP	FLA	QTY	HP	FLA	Part #	KW*	FLA	FLA	FLA	MCA	MOP
DHH0727D	575/3/60	1	6.0	58.2	1	0.33	0.67	1	1.2	2.0	-	-	-	-	-	10.2	15
											-	-	-	3.5	-	13.7	15
											-	-	-	-	1.0	11.2	15
											-	-	-	3.5	1.0	14.7	20
											EH*D-7S05A	5.0	4.8	-	-	16.2	20
														3.5	-	19.7	20
														-	1.0	17.2	20
														3.5	1.0	20.7	25
											EH*D-7S10A	10.0	9.6	-	-	22.2	25
														3.5	-	25.7	30
														-	1.0	23.2	25
														3.5	1.0	26.7	30
											EH*D-7S15A	15.0	14.4	-	-	28.2	30
														3.5	-	31.7	35
														-	1.0	29.2	30
														3.5	1.0	32.7	35
											EH*D-7S20A	20.0	19.2	-	-	34.2	35
														3.5	-	37.7	40
														-	1.0	35.2	40
														3.5	1.0	38.7	40
											EH*D-7S30A	30.0	28.9	-	-	46.3	50
														3.5	-	49.8	50
														-	1.0	47.3	50
														3.5	1.0	50.8	60
DHH0727W	575/3/60	1	6.0	58.2	1	0.33	0.67	1	2.3	3.8	-	-	-	-	-	12.0	15
											-	-	-	3.5	-	15.5	20
											-	-	-	-	1.0	13.0	15
											-	-	-	3.5	1.0	16.5	20
											EH*D-7S05A	5.0	4.8	-	-	18.0	20
														3.5	-	21.5	25
														-	1.0	19.0	20
														3.5	1.0	22.5	25
											EH*D-7S10A	10.0	9.6	-	-	24.0	25
														3.5	-	27.5	30
														-	1.0	25.0	30
														3.5	1.0	28.5	30
											EH*D-7S15A	15.0	14.4	-	-	30.0	35
														3.5	-	33.5	35
														-	1.0	31.0	35
														3.5	1.0	34.5	35
											EH*D-7S20A	20.0	19.2	-	-	36.0	40
														3.5	-	39.5	40
														-	1.0	37.0	40
														3.5	1.0	40.5	45
											EH*D-7S30B	30.0	28.9	-	-	48.1	50
														3.5	-	51.6	60
														-	1.0	49.1	50
														3.5	1.0	52.6	60

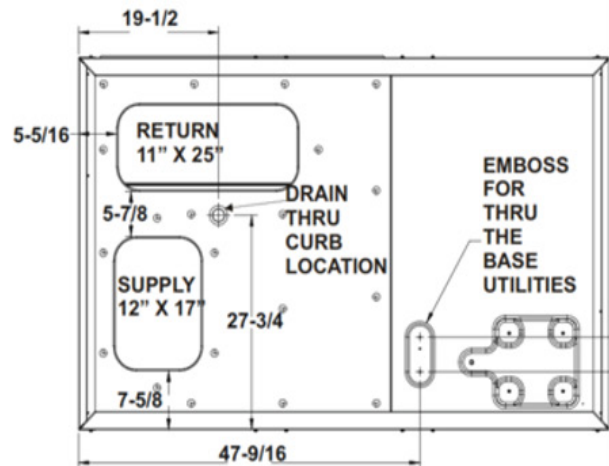
APPENDIX C UNIT DIMENSIONS



Tonnage	UNIT HEIGHT		HORIZONTAL CONDENSATE DRAIN			
	DIM "A" (ABOVE)		DIM "B" (BELOW)		DIM "C" (BELOW)	
	DHC	DHH	DHC	DHH	DHC	DHH
3 TON	40"		20"		15"	
4 TON	43-1/2"	43-1/2"			8-1/8"	8-1/8"
5 TON						
6 TON	54"				15"	



HORIZONTAL DISCHARGE



BOTTOM VIEW OF UNIT

VERTICAL DISCHARGE

NOTE: REFER TO IOD-7082 INCLUDED IN THE LITERATURE PACK FOR INSTALLING HORIZONTAL DUCT COVERS.

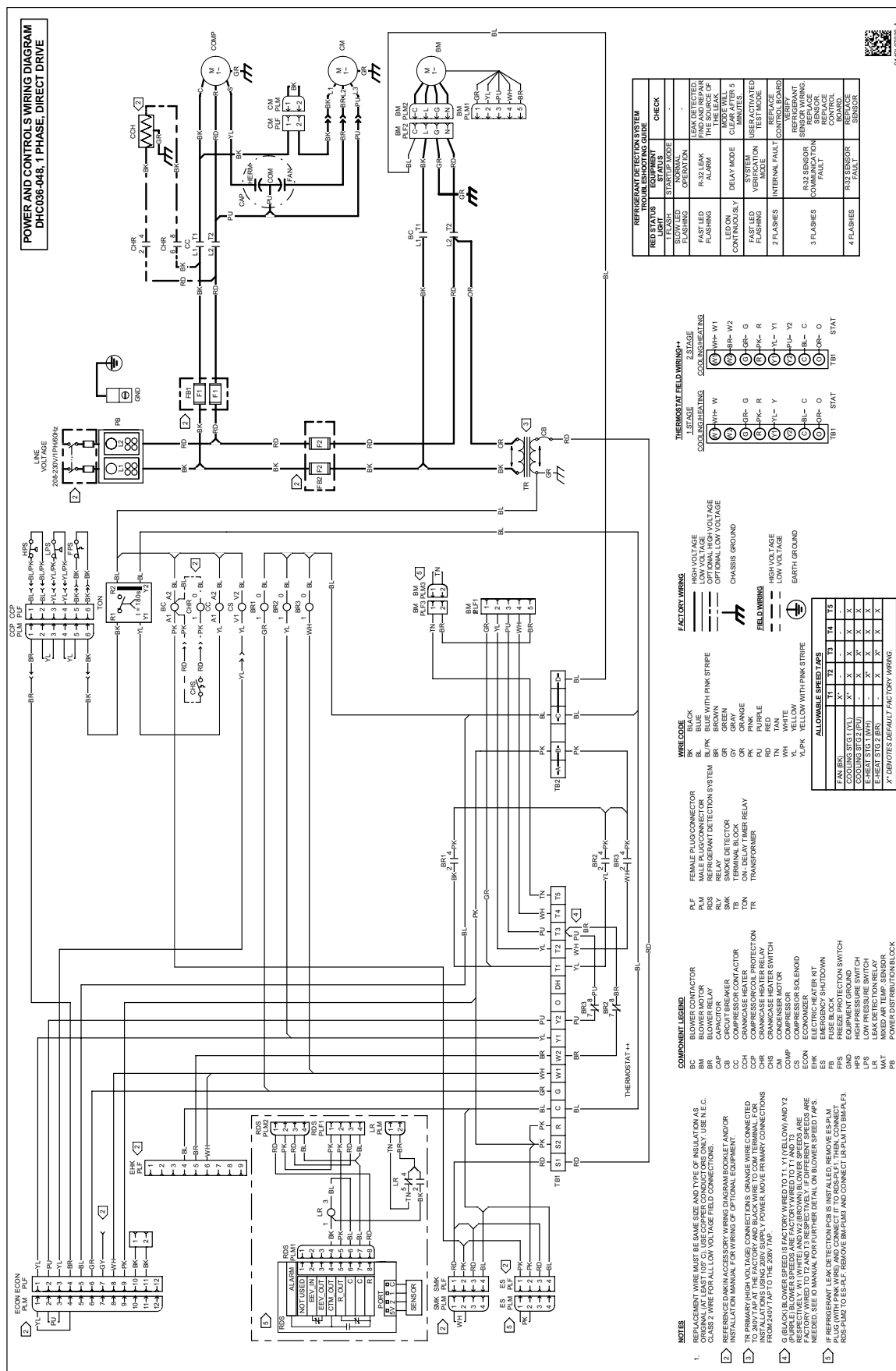
APPENDIX D AIR FLOW FOR ELECTRIC HEAT

AIR FLOW FOR ELECTRIC HEAT

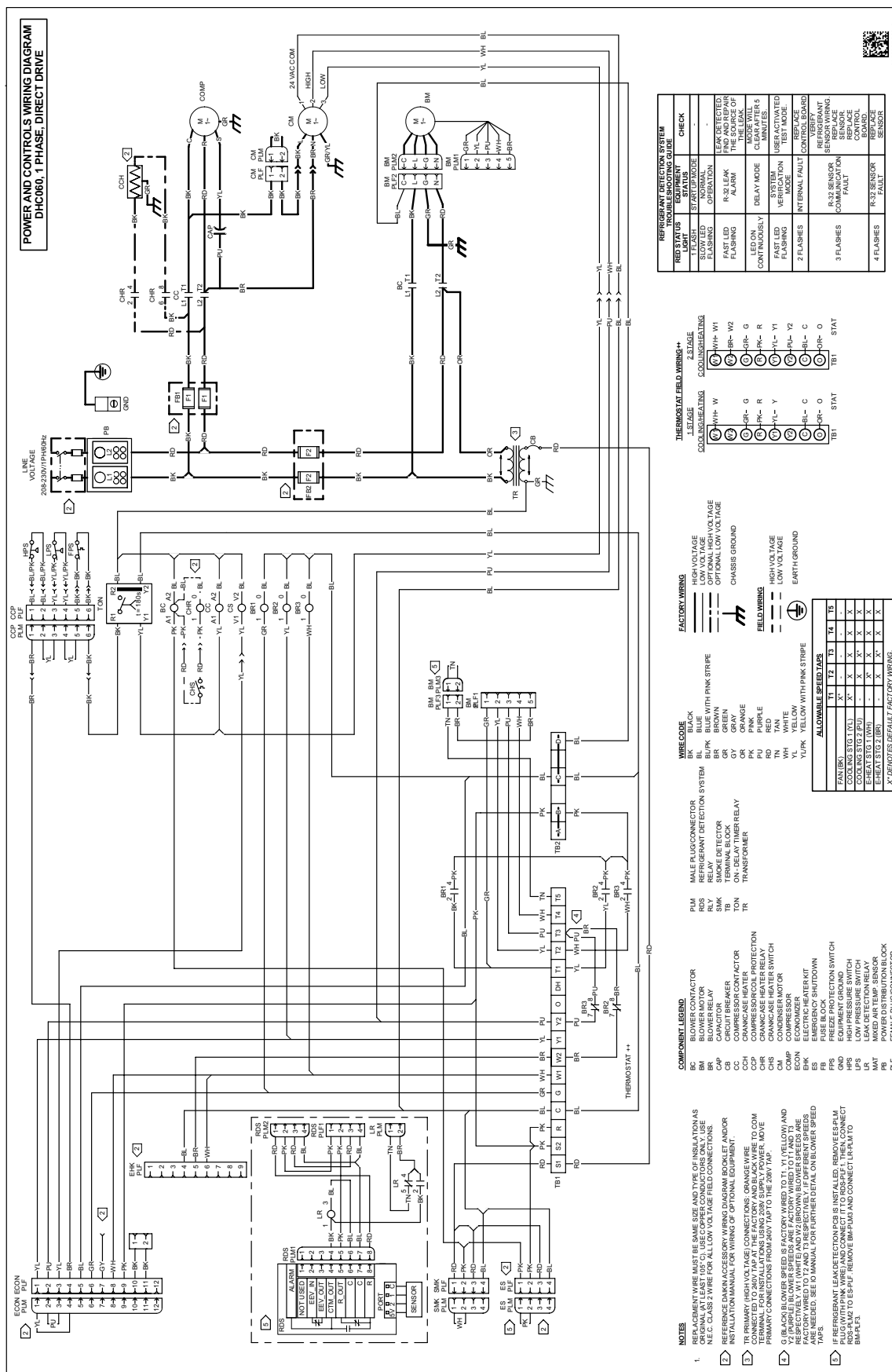
UNIT	HEATER KIT MODEL NUMBER	kW	MINIMUM CFM	MAXIMUM CFM
3 ton AC STD Static	EH*D-*S05A	5	1325	1500
	EH*D-*S10A	10		
	EH*D-*S15A	15		
3 ton HP STD Static	EH*D-*S05A	5		
	EH*D-*S10A	10		
	EH*D-*S15A	15		
3 ton AC HI Static	EH*D-*S05A	5		
	EH*D-*S10A	10		
	EH*D-*S15A	15		
3 ton HP HI Static	EH*D-*S05A	5		
	EH*D-*S10A	10		
	EH*D-*S15A	15		
4 ton AC STD Static	EH*D-*S05A	5	1600	2000
	EH*D-*S10A	10		
	EH*D-*S15A	15		
	EH*D-*S20A	20		
4 ton HP STD Static	EH*D-*S05A	5		
	EH*D-*S10A	10		
	EH*D-*S15A	15		
	EH*D-*S20A	20		
4 ton AC HI Static	EH*D-*S05A	5		
	EH*D-*S10A	10		
	EH*D-*S15A	15		
	EH*D-*S20A	20		
4 ton HP HI Static	EH*D-*S05A	5		
	EH*D-*S10A	10		
	EH*D-*S15A	15		
	EH*D-*S20A	20		
5 ton AC STD Static	EH*D-*S05A	5	1900	2500
	EH*D-*S10A	10		
	EH*D-*S15A	15		
	EH*D-*S20A	20		
5 ton HP STD Static	EH*D-*S05A	5		
	EH*D-*S10A	10		
	EH*D-*S15A	15		
	EH*D-*S20A	20		
5 ton AC HI Static	EH*D-*S05A	5		
	EH*D-*S10A	10		
	EH*D-*S15A	15		
	EH*D-*S20A	20		
5 ton HP HI Static	EH*D-*S05A	5		
	EH*D-*S10A	10		
	EH*D-*S15A	15		
	EH*D-*S20A	20		
6 ton AC/HP STD Static	EH*D-*S05A	5	2100	3000
	EH*D-*S10A	10		
	EH*D-*S15A	15		
	EH*D-*S20A	20		
	EH*D-*S30A	30		
6 ton AC/HP HI Static	EH*D-*S05A	5	2175	
	EH*D-*S10A	10		
	EH*D-*S15A	15		
	EH*D-*S20A	20		
	EH*D-*S30B	30		

HEATER KIT MODEL NUMBER NOMENCLATURE									
	EH	X	D	-	3	S	15	A	
	1,2	3	4	-	5	6	7,8	9	
Electric Heater									
Heater Type									
X									
S									
Drive System									
D									
Voltage									
1									
3									
4									
7									
Chassis									
S									
M									
L									
Kilowatt									
05									
10									
15									
18									
20									
30									
Limit Configuration									
None									
A									
B									
C									
D									

POWER AND CONTROLS WIRING DIAGRAM
DHC036-048, 1 PHASE, DIRECT DRIVE

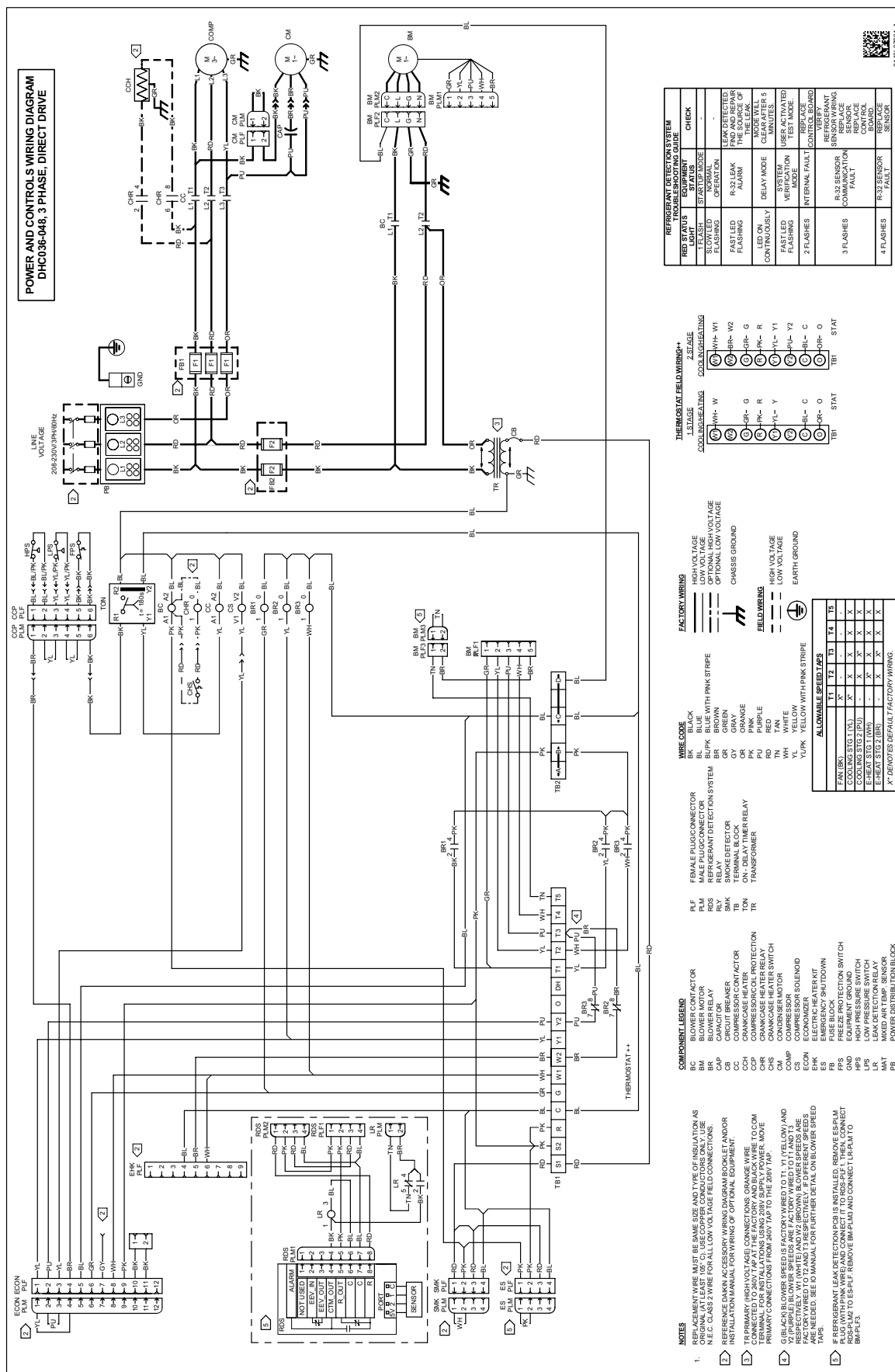


Wiring is subject to change. Always refer to the wiring diagram on the unit for the most up-to-date wiring.



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POWER AND CONTROLS WIRING DIAGRAM



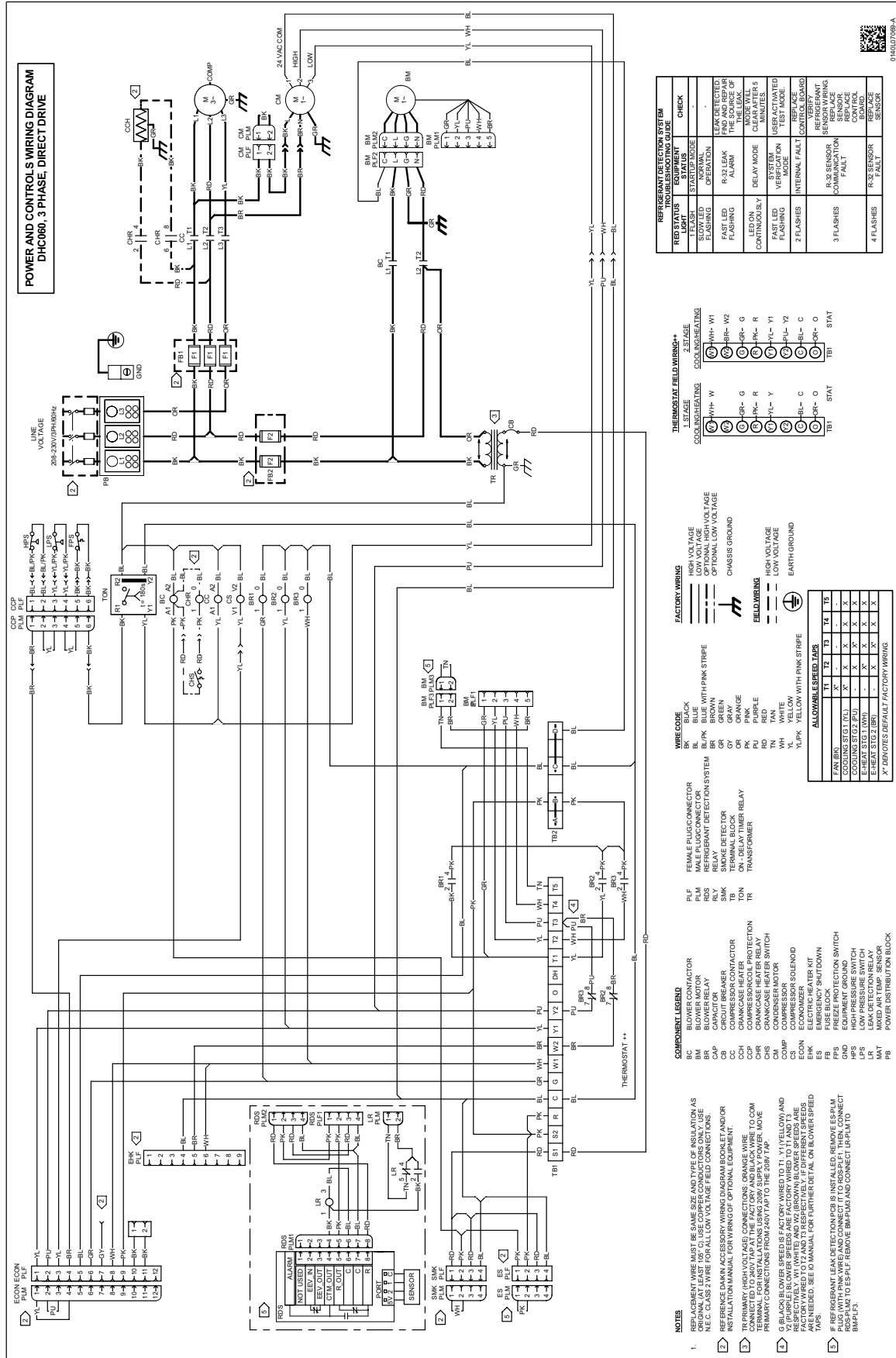
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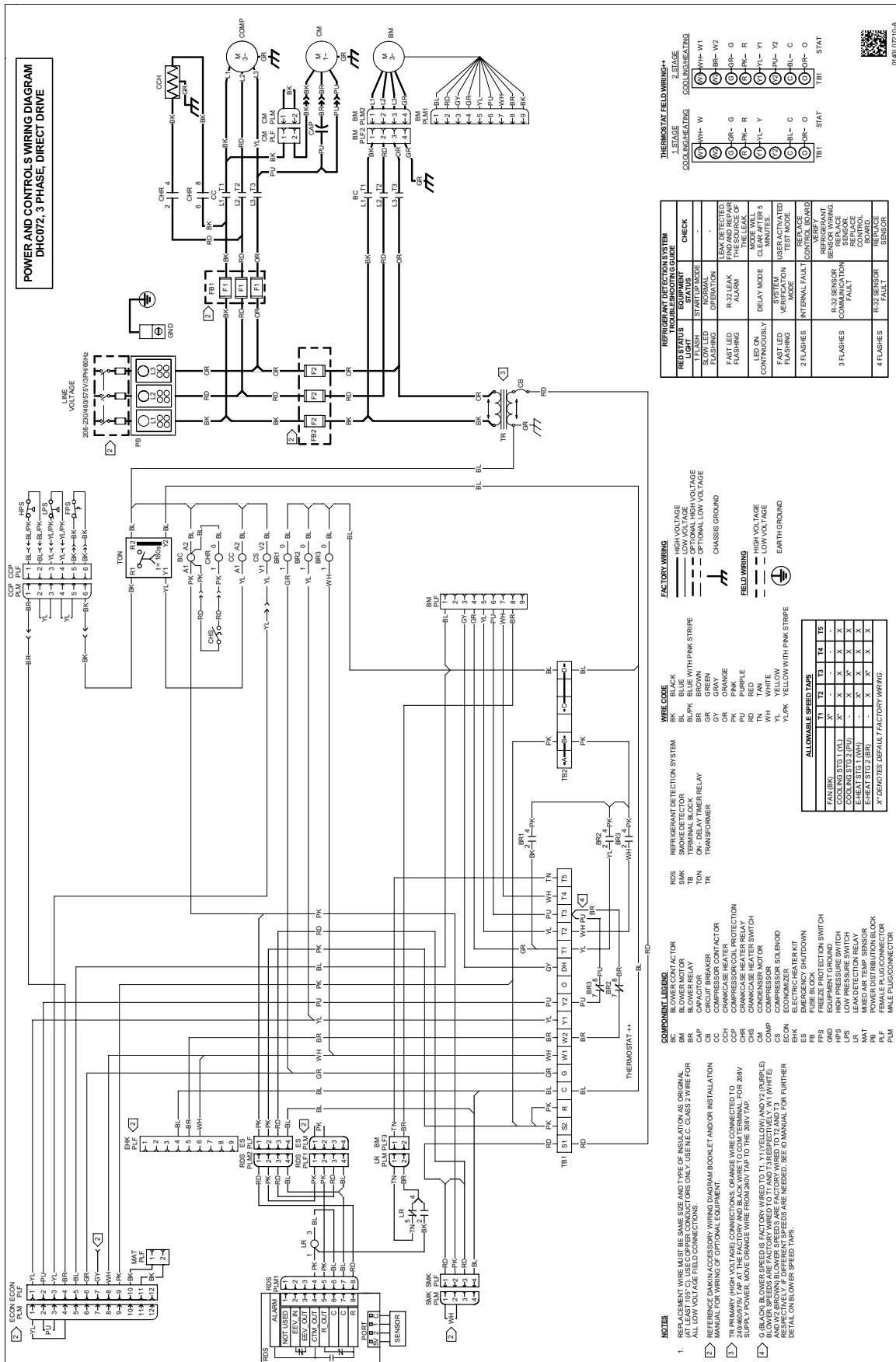
HIGH VOLTAGE!

WARNING

DISCONNECT ALL POWER BEFORE SERVICING OR INSTALLING THIS UNIT. MULTIPLE POWER SOURCES MAY BE PRESENT. FAILURE TO DO SO MAY CAUSE PROPERTY DAMAGE, PERSONAL INJURY OR DEATH.



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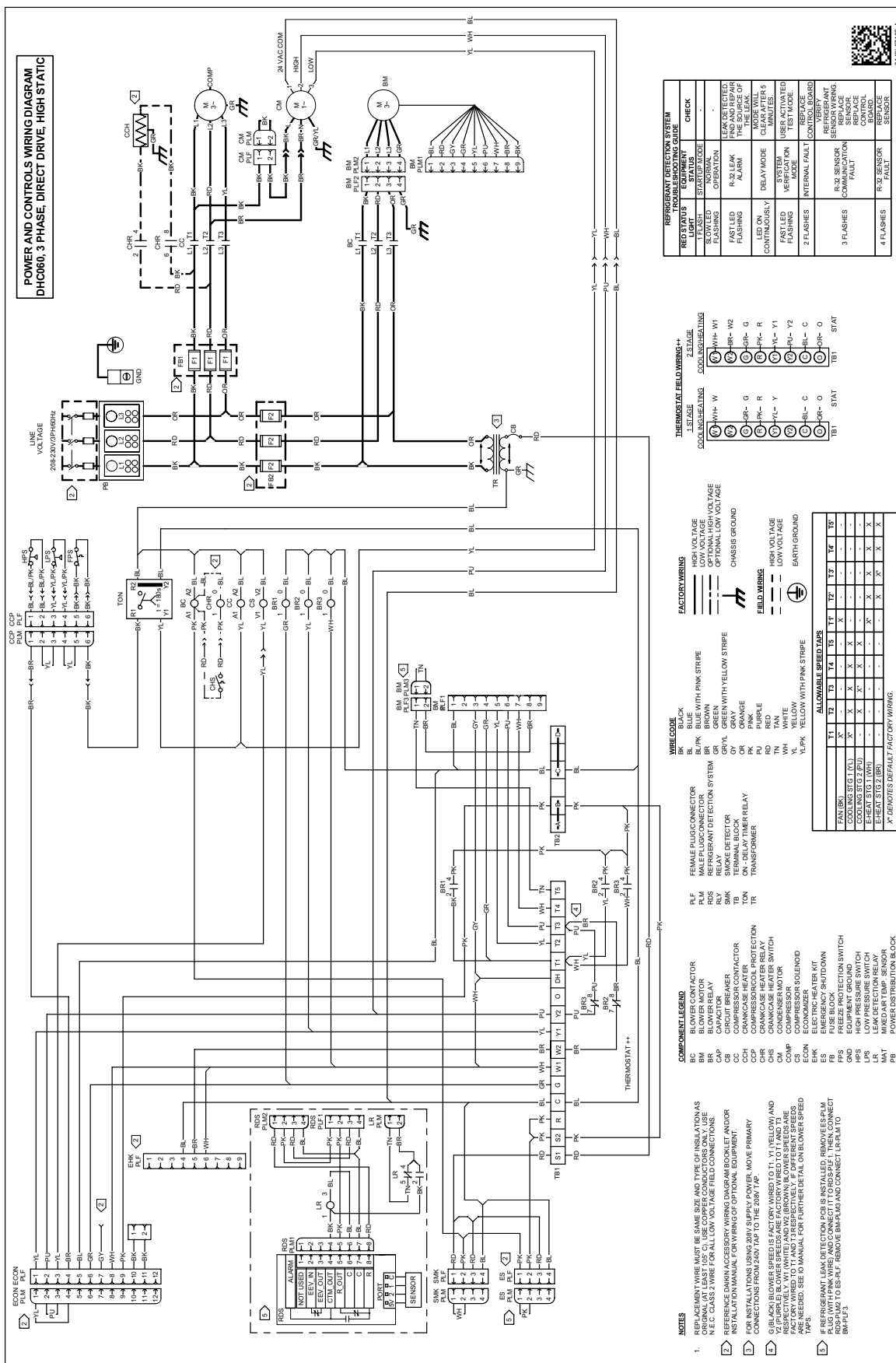
Wiring is subject to change. Always refer to the wiring diagram on the unit for the most up-to-date wiring.

WARNING



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HIGH VOLTAGE!
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POWER AND CONTROLS WIRING DIAGRAM
HC072, 3 PHASE, DIRECT DRIVE, HIGH STATIC



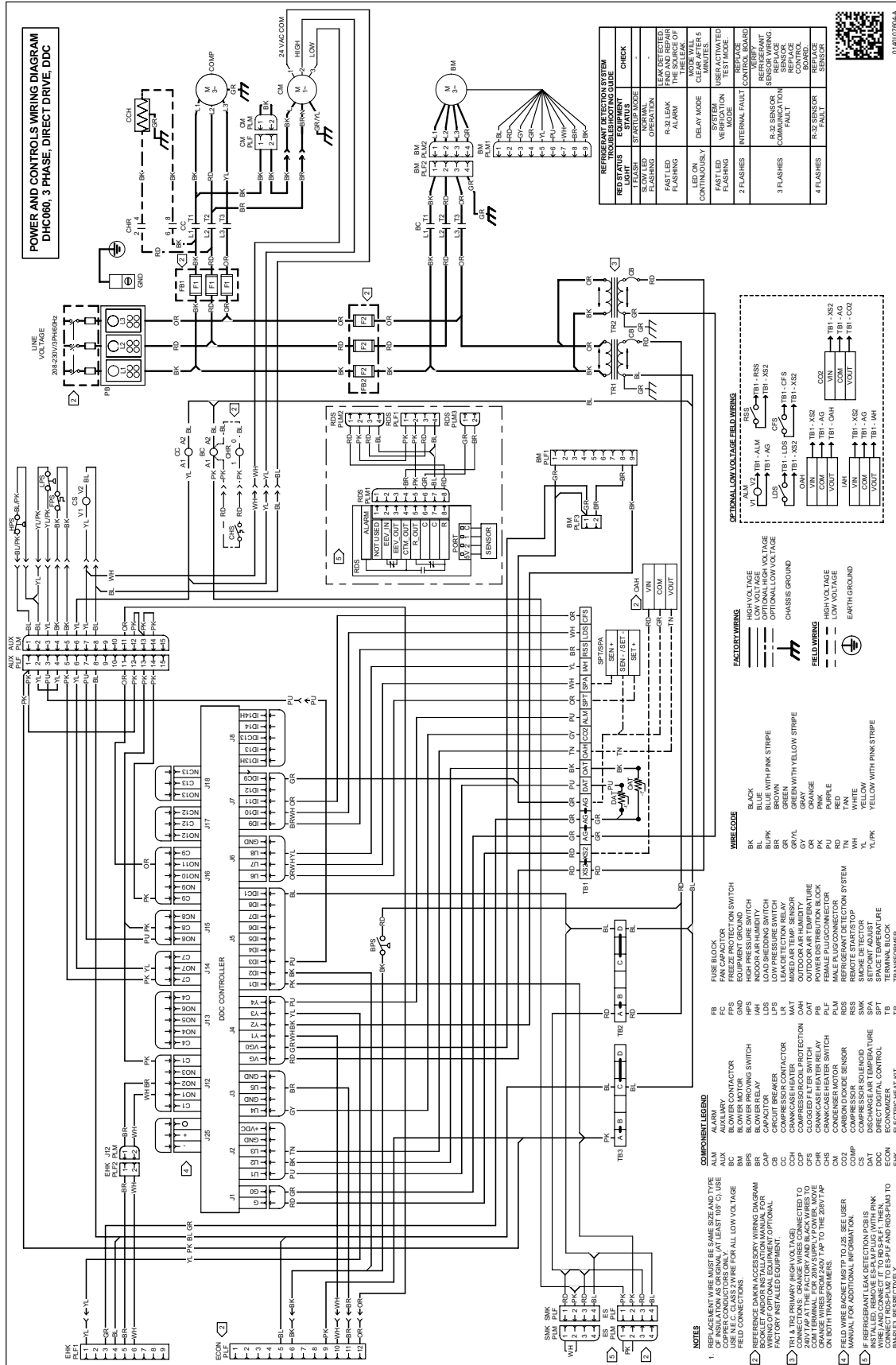
74

WARNING

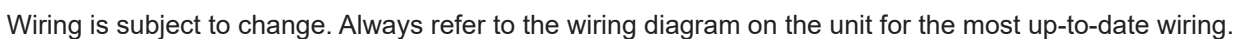


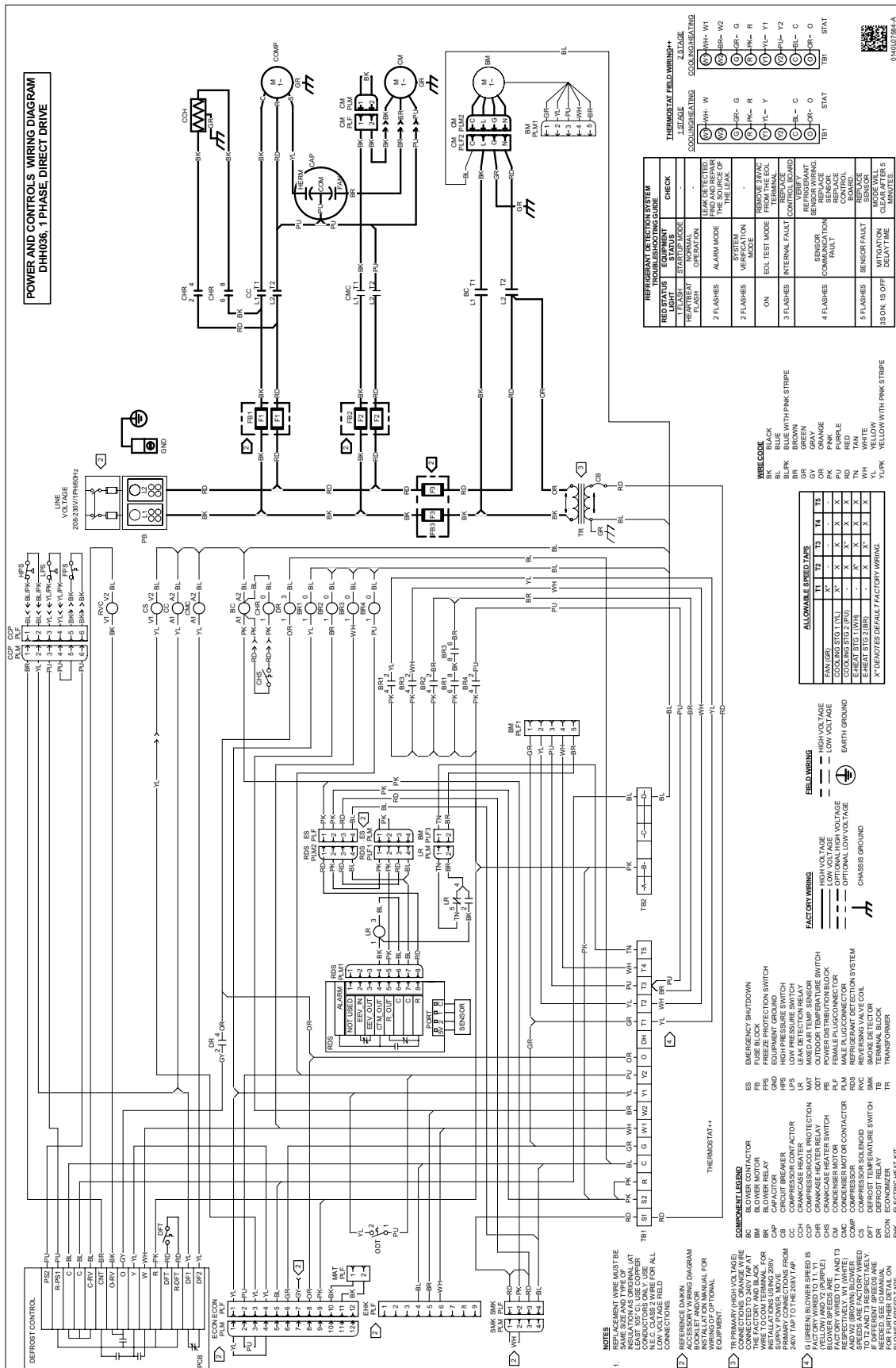
WARNING

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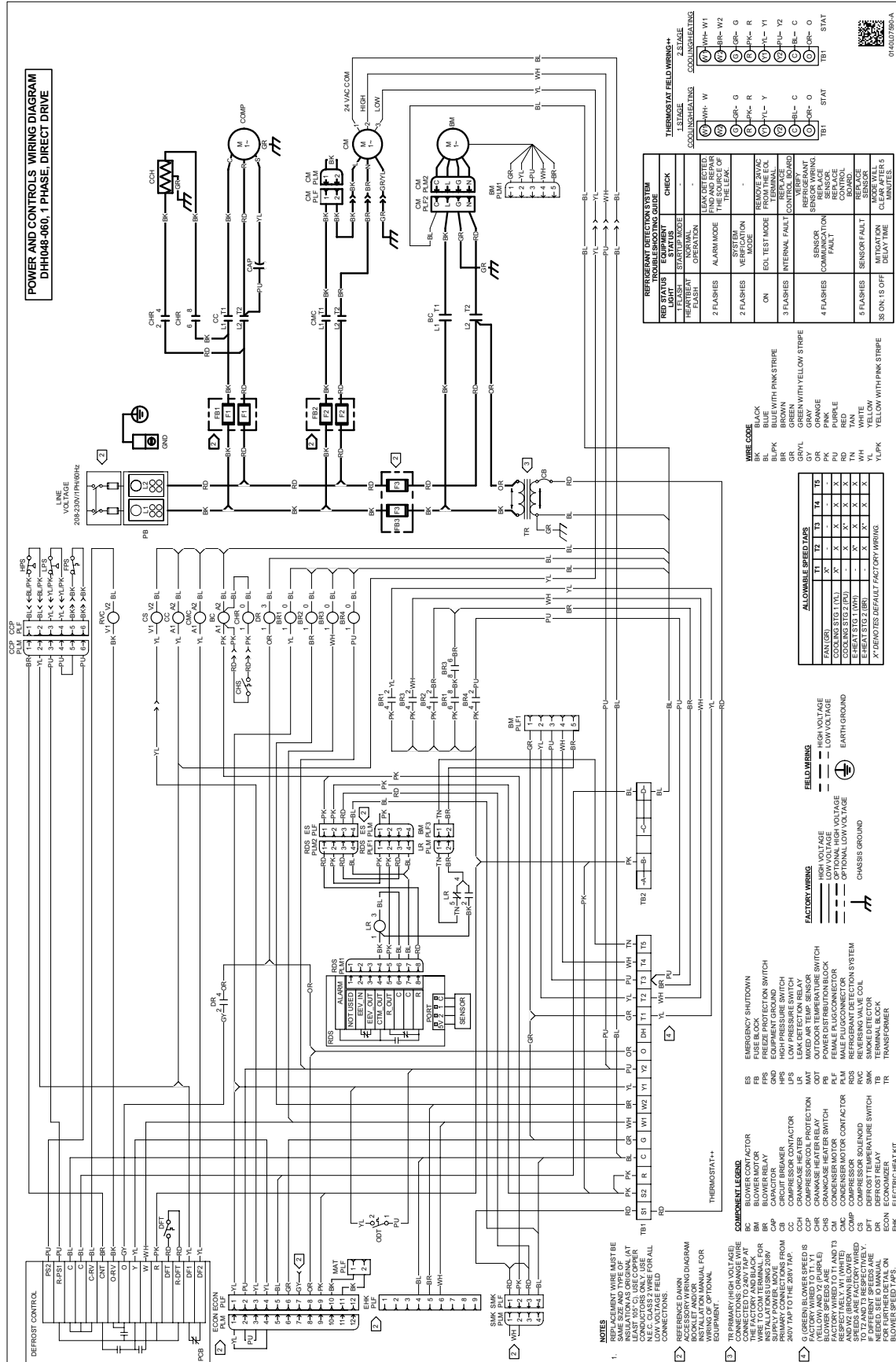




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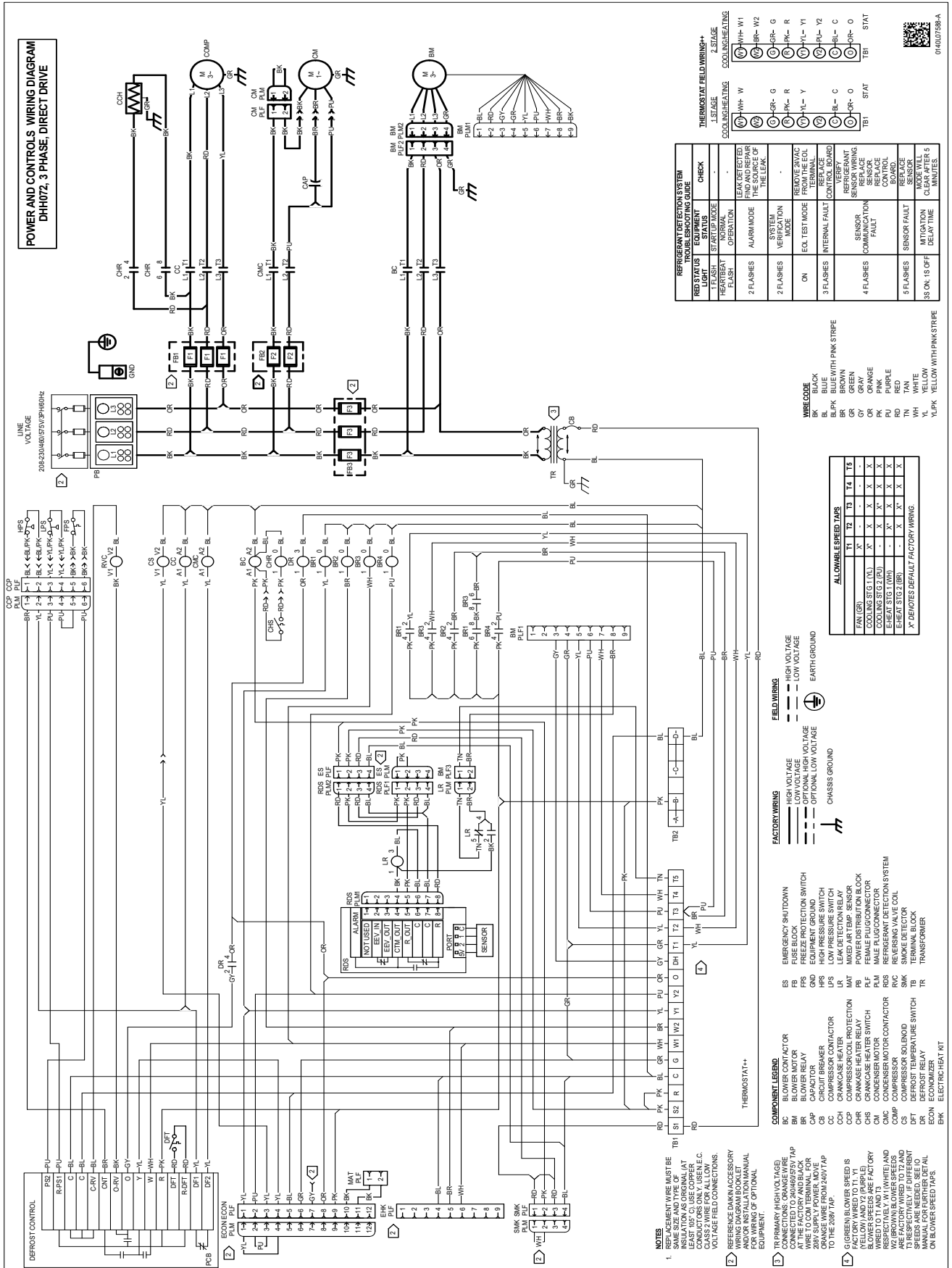


**HIGH VOLTAGE!
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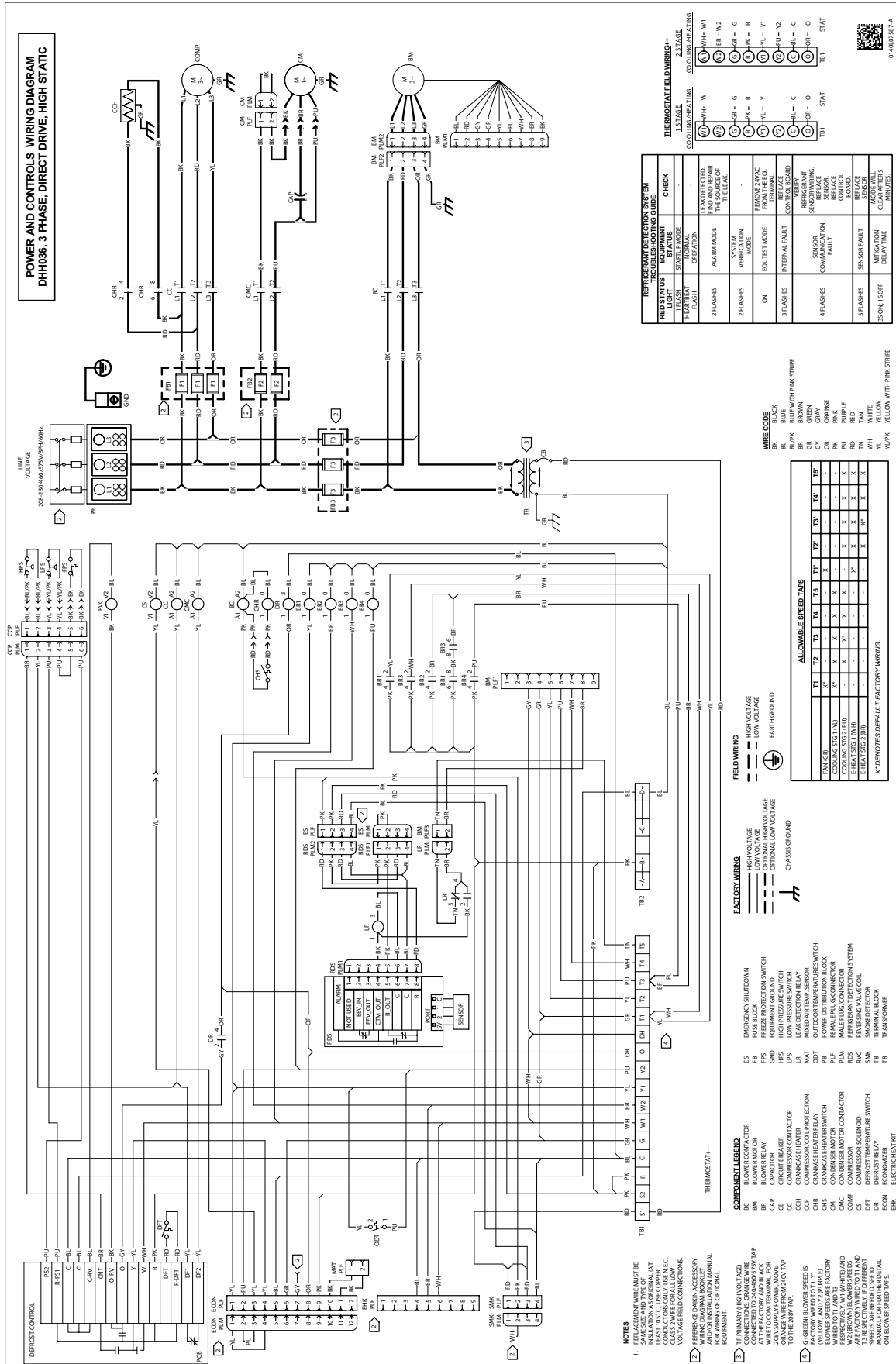
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HIGH VOLTAGE!

WARNING

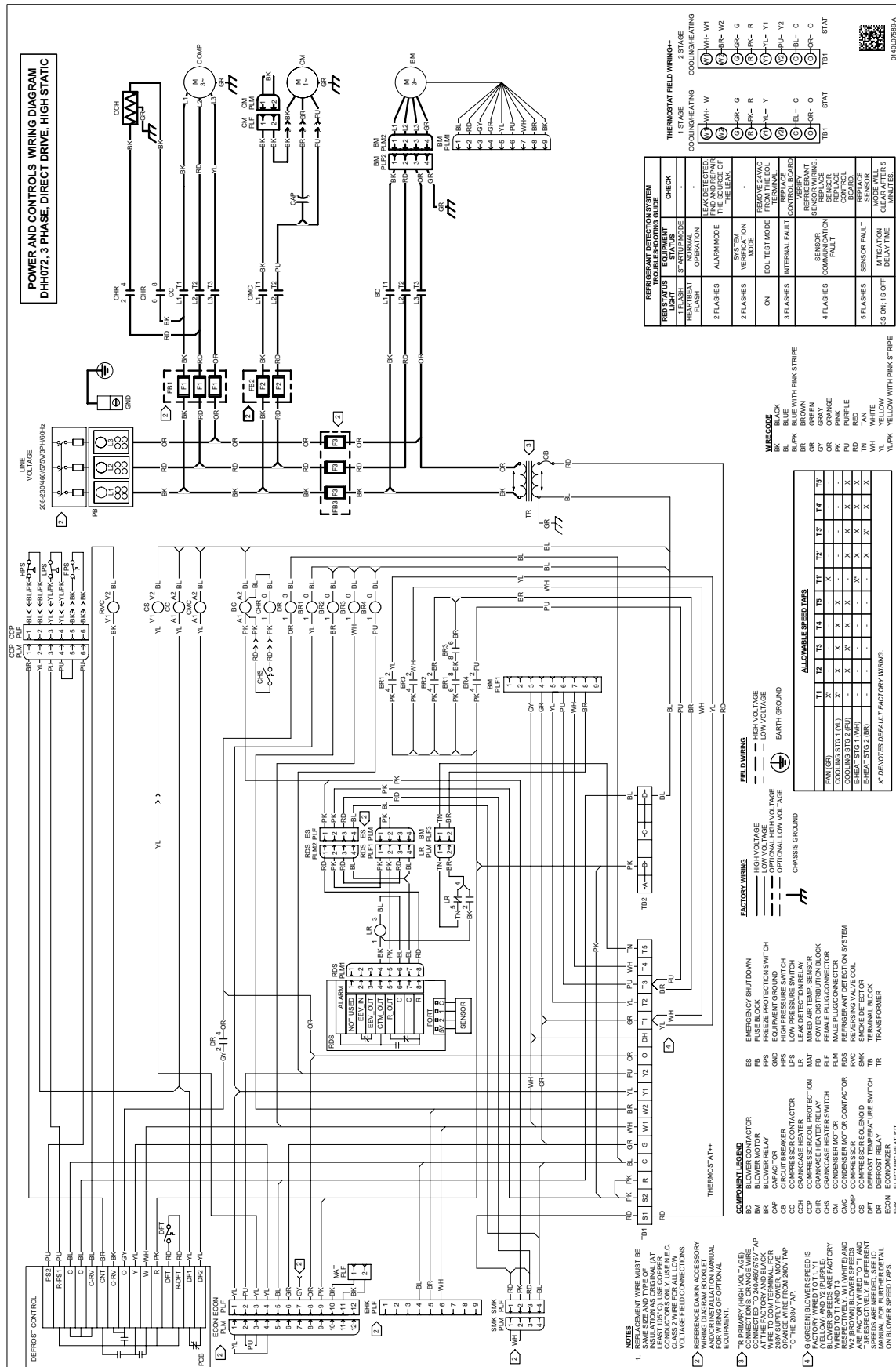
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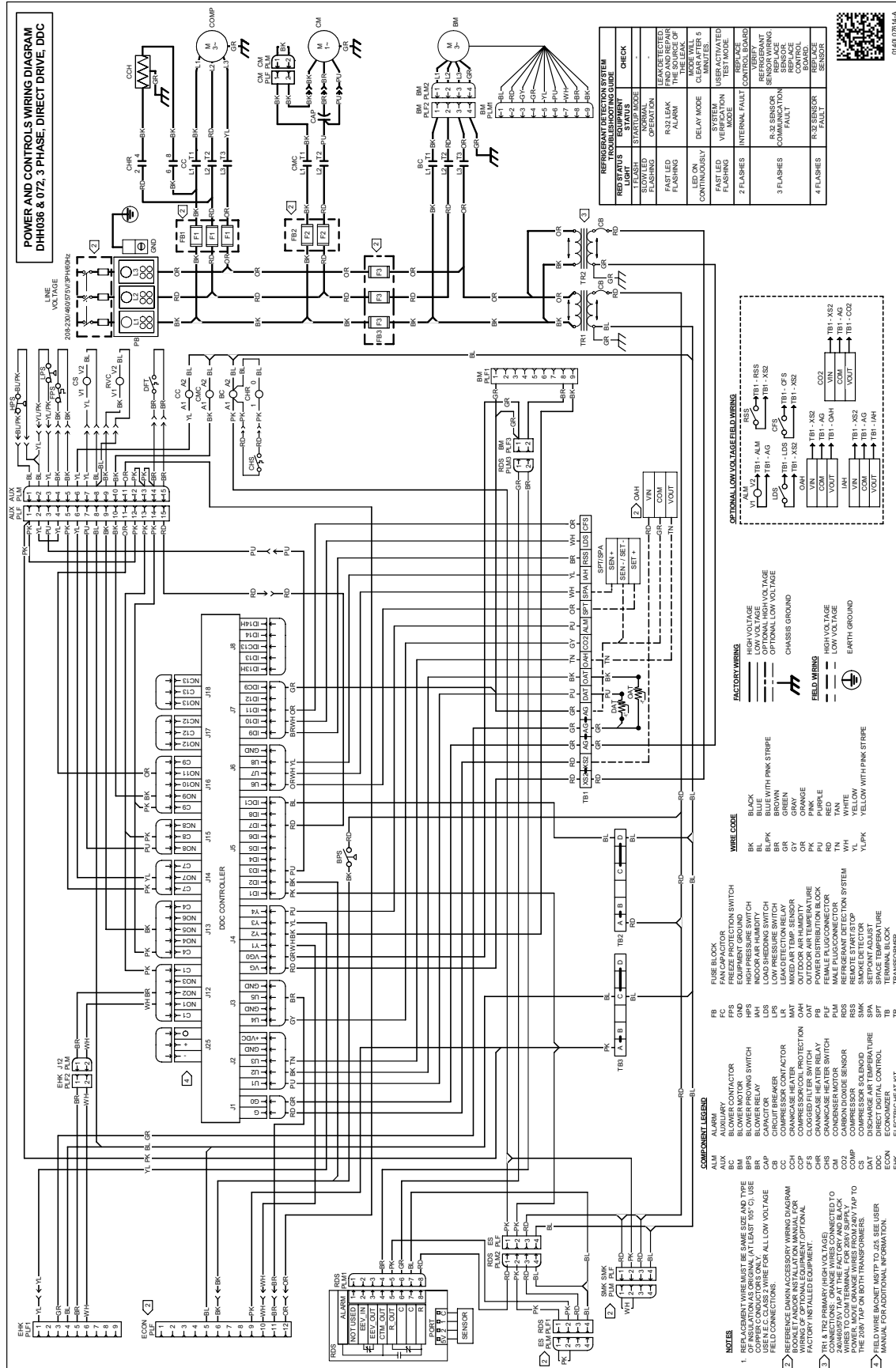
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WARNING



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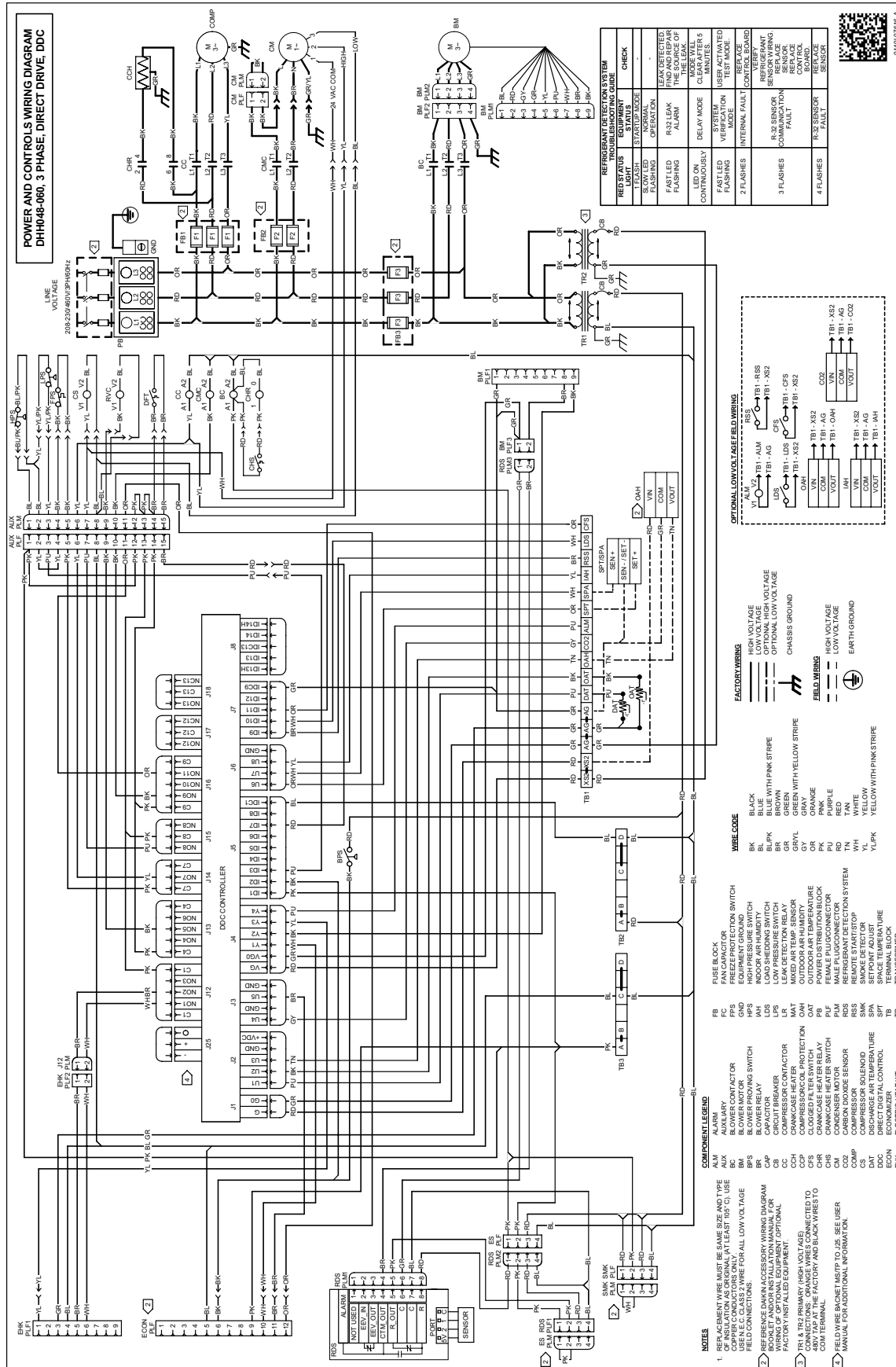


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WARNING





Start-up Checklist

**Store in job file*

Date: _____ Location: _____
Model Number: _____
Serial Number: _____
Technician: _____ Unit #: _____

Pre Start-Up

(Check each item as completed)

- ☐ Verify all packaging material has been removed.
- ☐ Remove all shipping brackets per installation instructions.
- ☐ Verify the job site voltage agrees with the unit serial plate.
- ☐ Verify condensate connection is installed per installation instructions.
- ☐ Verify proper clearance around the unit for safety, service, maintenance and proper unit operation.
- ☐ Verify proper weatherproofing of all ductwork, roof curbs and electrical connections.
- ☐ Check that the flue screen is in place.
- ☐ Check gas piping for leaks.
- ☐ Verify gas pressure to the unit is within the range specified on the serial plate.
- ☐ Check to ensure that all fans, pulleys and wheels are secure.
- ☐ Check for proper belt tension and alignment per installation instructions.
- ☐ Check refrigerant piping for rubbing and leaks. *Repair if necessary.*
- ☐ Check unit wiring to ensure it is not in contact with refrigerant piping or sharp metal edges.
- ☐ Check all electrical connections and terminals. *Tighten as needed.*
- ☐ Verify that the crankcase heaters have been energized for 24 hours.
- ☐ Verify the scroll compressor(s) are rotating in the right direction.
- ☐ Verify all accessories are installed and operating correctly.
- ☐ Check filters and replace if necessary.
- ☐ Verify the installation of the thermostat.



Start-up Checklist

Start-Up

(Insert the values as each item is completed.)

ELECTRICAL

Supply Voltage	L1 - L2	_____	L2 - L3	_____	L3 - L1	_____
Circuit 1 Compressor Amps	L1	_____	L2	_____	L3	_____
Circuit 2 Compressor Amps	L1	_____	L2	_____	L3	_____
Blower Amps	L1	_____	L2	_____	L3	_____
Condenser Fan Amps	Fan 1	_____	Fan 2	_____	Fan 3	_____

BLOWER EXTERNAL STATIC PRESSURE

Return Air Static Pressure	_____	IN. W.C.
Supply Air Static Pressure	_____	IN. W.C.
Total External Static Pressure	_____	IN. W.C.
Blower Wheel RPM	_____	RPM

TEMPERATURES

Outdoor Air Temperature	_____	DB	_____	WB
Return Air Temperature	_____	DB	_____	WB
Cooling Supply Air Temperature	_____	DB	_____	WB
Heating Supply Air Temperature	_____	DB	_____	

PRESSURES

Gas Inlet Pressure	_____	IN. W.C.		
Gas Manifold Pressure	_____	IN. W.C. (Low Fire)	_____	IN. W.C. (High Fire)
Suction Circuit 1	_____	PSIG	_____	°F
Superheat (Orifice System)			_____	°F
Suction Circuit 2	_____	PSIG	_____	°F
Superheat (Orifice System)			_____	°F
Discharge Circuit 1	_____	PSIG	_____	°F
Subcooling (TXV System)			_____	°F
Discharge Circuit 2	_____	PSIG	_____	°F
Subcooling (TXV System)			_____	°F

(HEAT PUMP ONLY)

Suction Circuit 1	_____	PSIG	_____	°F
Suction Circuit 2	_____	PSIG	_____	°F
Discharge Circuit 1	_____	PSIG	_____	°F
Discharge Circuit 2	_____	PSIG	_____	°F

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CUSTOMER FEEDBACK

Daikin Comfort Technologies is very interested in all product comments.

Please fill out the feedback form on the following link:

<https://daikincomfort.com/contact-us>

You can also scan the QR code on the right to be directed to the feedback page.



Our continuing commitment to quality products may mean a change in specifications without notice.

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