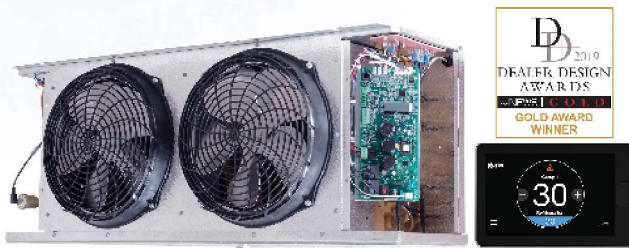


Next-Gen All-Temp Low Profile Unit Coolers

Air, Electric and Hot Gas Defrost Models



Shown with optional EcoNet® Enabled Controller
and Command Center



Installation and Operations Manual

Next-Gen All-Temp Low Profile Unit Coolers

Inspection

When the equipment is received, check the quantity of cartons and crates against the bill of lading. Inspect all containers for visible damage. Report any damage or shortages to the freight company immediately. It is the customer's responsibility to file all claims with the freight company.

Installation

Installation and maintenance are to be performed by qualified personnel who are familiar with local codes and regulations. Installers should have previous experience with this type of equipment.

CAUTION: Avoid contact with sharp edges and coil surfaces. They are potential hazards.

Determine the best location for the unit in the walk-in cooler or freezer. Place the unit as far as possible from any door openings. This will help to prevent warm, moist air from being drawn into the unit, reducing the potential for icing problems. Low Profile models are draw-through type units, which discharge air directly from the fan into the room.

Adequate clearances should be maintained to allow for proper air flow through the unit and to allow for regular maintenance and service (See Figure 1 for recommended location guidelines).

Remove all packaging materials before the unit is raised into position. Be certain that the unit is not set on the drain fitting or refrigerant connections before installation. The unit should be hung using 5/16 inch stainless steel rods or bolts at all hanger slots. The Unit must be positioned flush with the ceiling with any gaps properly caulked.

The drain line should be pitched a minimum of 4 inches per foot to allow proper drainage and should exit the room as quickly as possible. Do not reduce the drain line size. All drain lines must be trapped outside of the enclosure where the temperature is never below 35°F. Drain lines should run to an open drain and should never be connected directly to a sewage or waste line. Drain lines should be heated and insulated to prevent freezing.

Wiring

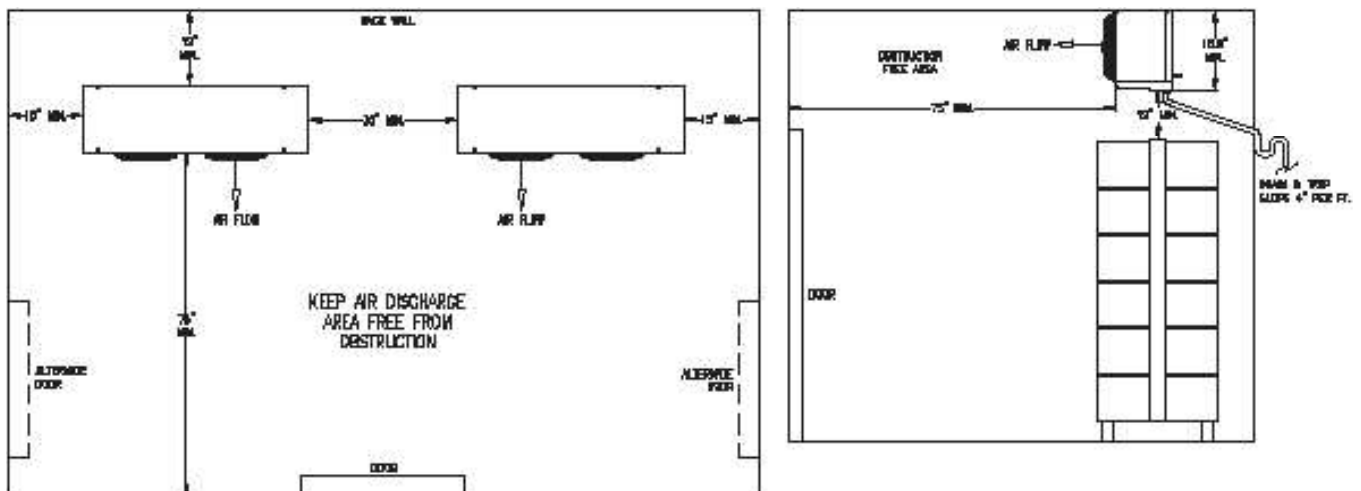
All wiring must be done in compliance with local and national codes. Use only copper conductors.

Electric defrost units are supplied with a defrost termination fan delay thermostat (DTFD). The thermostat terminates the defrost cycle when a fixed temperature is reached. Additionally, the fan delay function allows the warm coil to cool after a defrost cycle, prior to the fans turning on. A heater safety thermostat is installed to prevent heaters from overheating above 75°F.

For wiring diagrams, see Figures 2 through 5.

Figure 1

Recommended Unit Cooler Locations



Installation and Operations Manual

Expansion Valve

Expansion valves should be selected and installed in accordance with the valve manufacturers recommendations. All units require externally equalized expansion valves and must have the equalizer line connected. The expansion valve bulb must be insulated and securely clamped at the 4 o'clock or 8 o'clock position on a horizontal run of the suction line. Proper location and full contact of the bulb is extremely important to the performance of the system.

New expansion valves usually need to be adjusted. Superheat settings should be checked after the system has run long enough to reach a balanced state. Low and medium temperature systems will usually operate more efficiently with a superheat setting of 6.0°F at design room temperature (always maintain a 20°F compressor superheat).

To Obtain Evaporator Superheat:

1. Measure the suction line temperature at the expansion valve bulb with an accurate electronic thermometer.
2. Obtain a suction pressure reading at the Schrader fitting at the evaporator suction connection.
3. Convert the pressure reading to temperature by using a temperature/pressure conversion chart.

4. Subtract the converted temperature from the measured temperature. The resulting difference represents the evaporator superheat. (For close coupled systems, it may be necessary to increase the evaporator superheat to insure the minimum acceptable superheat at the compressor.)

The maximum recommended evaporator TD for medium temperature systems is 15°F. The maximum recommended TD for low temperature systems is 13°F.

Evacuation

Proper installation procedures must include a deep evacuation of the system. A clean/dry system is essential when charging refrigerant.

General Maintenance

Disconnect all electrical power to the unit before inspecting or cleaning. Evaporator coils, blades and guards should be checked periodically and cleaned of all dirt or grease accumulation. Do not use ammonia or other cleaning agents that are corrosive to Copper or Aluminum. The drain pan should be lowered and thoroughly cleaned to permanently clear any drain restriction. The fan motors are permanently lubricated and do not require periodic oiling.

Optional Components - EcoNet® Enabled Unit Coolers

The award-winning EcoNet Enabled Controller and EcoNet Command Center bring easy-to-use smart technology to commercial refrigeration applications.

The optional EcoNet Controller gives customers a higher level of efficiency and more control of their walk-in units for greater energy savings. The EcoNet Controller is shipped from the factory with the controller board already installed and all sensors and relays wired. The controller replaces the TXV, liquid line solenoid valve, room thermostat, time clock, and defrost termination and fan delay. Parameters are pre-selected to match equipment.

The optional EcoNet Command Center allows for EcoNet Enabled Unit Coolers to be programmed, monitored, and troubleshot outside of the space being cooled. The EcoNet Command Center is shipped loose and includes everything in the box to quickly install the device on a wall outside of the walk-in. System set up is easy with the intuitive touchscreen installer settings.

If the Next-Gen All-Temp Unit Cooler has the factory-installed EcoNet Enabled Controller (see photo below), you will need to reference the EcoNet Enabled Unit Coolers Installation and Operations Manual for further assistance.



EcoNet Enabled Controller
(factory-installed)

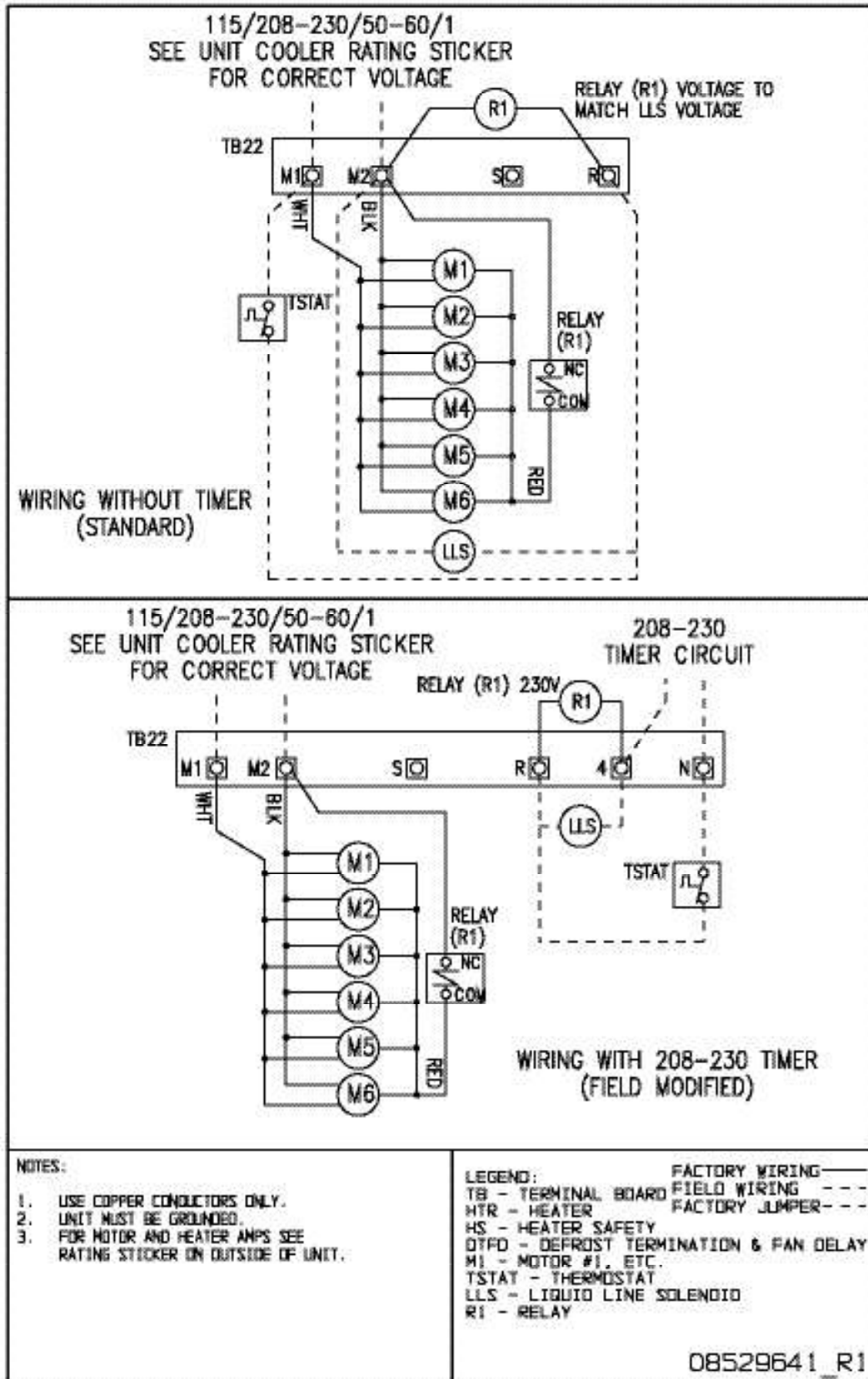


EcoNet Command Center
(shipped loose)

Next-Gen All-Temp Low Profile Unit Coolers

Figure 2

Wiring Diagrams - Air Defrost Models



Installation and Operations Manual

Figure 3

Wiring Diagram - Hot Gas Defrost

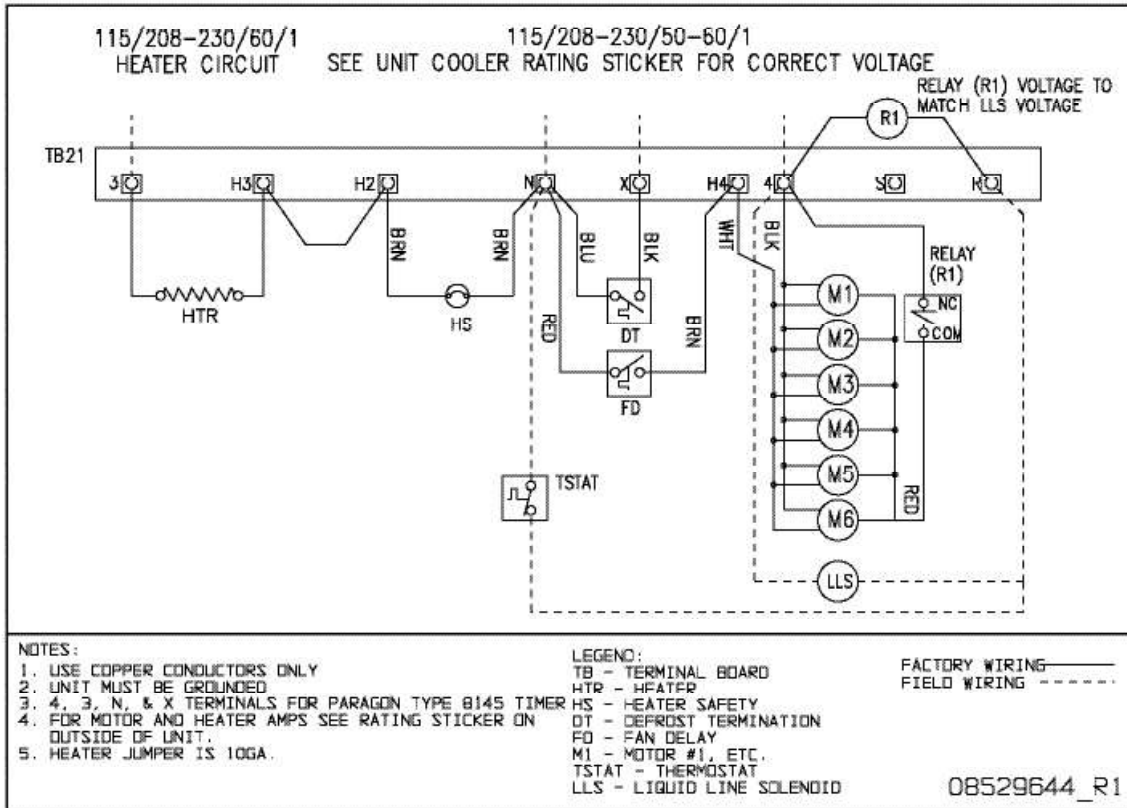
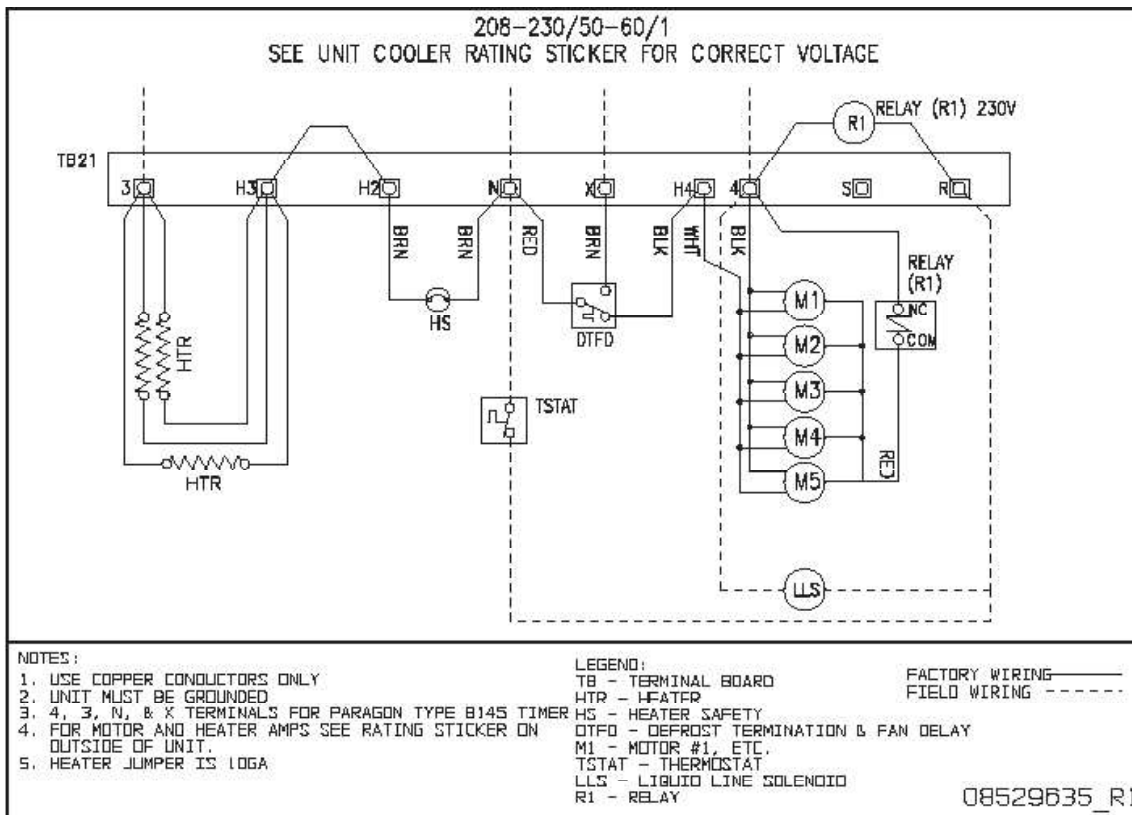


Figure 4

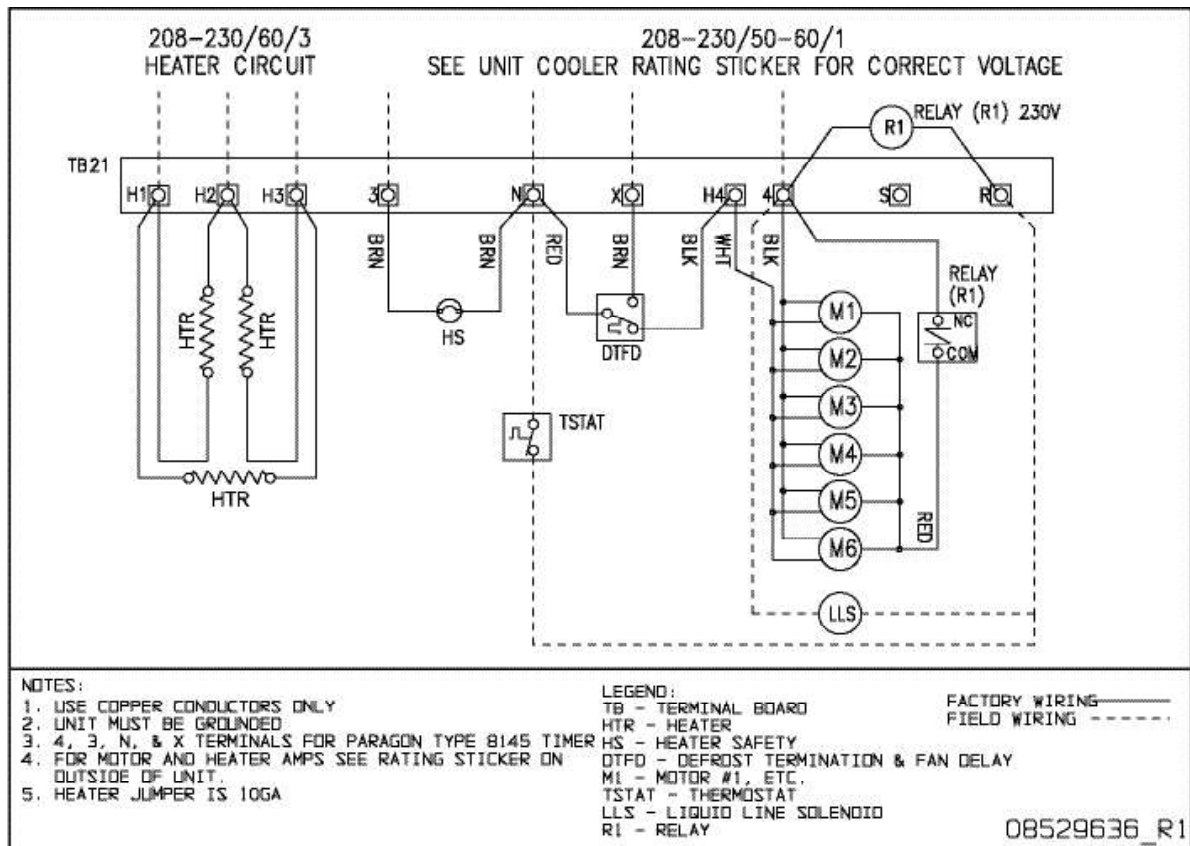
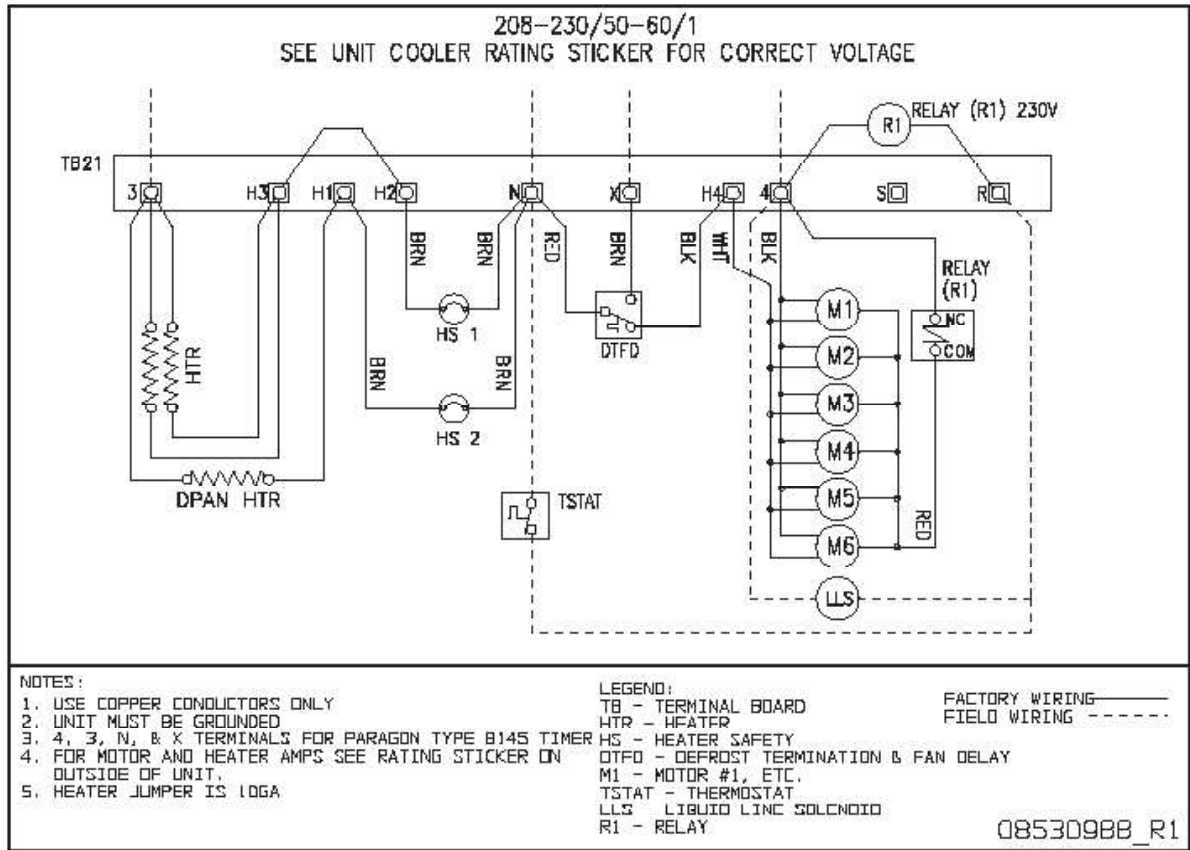
Wiring Diagram - Electric Defrost - 1 to 5 Fan Models



Next-Gen All-Temp Low Profile Unit Coolers

Figure 5

Wiring Diagrams - Electric Defrost - 6 Fan Models



Next-Gen All-Temp Replacement Parts

Part Number	Description
All Models or as Specified in Description	
0852833601	DRAIN PAN 1 FAN, AIR DEF
0852833701	DRAIN PAN 2 FAN , AIR DEF
0852833801	DRAIN PAN 3 FAN , AIR DEF
0852833901	DRAIN PAN 4 FAN , AIR DEF
0852834001	DRAIN PAN 5 FAN , AIR DEF
0852834101	DRAIN PAN 6 FAN , AIR DEF
0852833602	DRAIN PAN 1 FAN , ELECTRIC DEF
0852833702	DRAIN PAN 2 FAN , ELECTRIC DEF
0852833802	DRAIN PAN 3 FAN , ELECTRIC DEF
0852833902	DRAIN PAN 4 FAN , ELECTRIC DEF
0852834002	DRAIN PAN 5 FAN , ELECTRIC DEF
0852834102	DRAIN PAN 6 FAN , ELECTRIC DEF
08248171	DRAIN FITTING AL
08321595	DRAIN NUT
08321596	DRAIN GASKET
08528313	VENTURI 1 FAN
08528314	VENTURI 2 FAN
08528315	VENTURI 3 FAN
08528316	VENTURI 4 FAN
08528317	VENTURI 5 FAN
08528318	VENTURI 6 FAN
08528319	ENDCOVER DOOR
08216216	ECM, 115/230 V, 35 Watt, 2 Speed, Stud Mount (Electric Defrost)
08216211	ECM, 115/230 V, 35 Watt, 2 Speed, Screw Mount (Air Defrost)
08218183	DUAL SPEED MOTOR RELAY 120V
08218377	DUAL SPEED MOTOR RELAY 240V
08216124	1 speed MOTOR, ECM, 50 WATT, 1550 RPM, 115V, CCW (Hot Gas Defrost)
08216125	1 speed MOTOR, ECM, 50 WATT, 1550 RPM, 230V/1, CCW (Hot Gas Defrost)
08216155	2 speed MOTOR, ECM, 50 WATT, 1550 RPM, 115V, CCW (Hot Gas Defrost)
08216156	2 speed MOTOR, ECM, 50 WATT, 1550 RPM, 230V/1, CCW (Hot Gas Defrost)
08216074	MOTOR, PSC, 1/20 HP, 1550 RPM, 115V
08216073	MOTOR, PSC, 1/20 HP, 1550 RPM, 230V/1
08216135	MOTOR, PSC, 1/20 HP, 1550 RPM, 460V/1
08321627	MOTOR MOUNT, LEG, TALL (EC MOTORS)

Part Number	Description
08321628	MOTOR MOUNT, LEG, SHORT (PSC MOTORS)
08221175	FAN BLADE, 12" DIAM., 24° PITCH, CW (For use with EC Motors)
08221153	FAN BLADE, 12" DIAM., 24° PITCH, CW (For use with PSC Motors)
08321626	FAN GUARD, PLASTIC, HIGH THROW, BLACK, 12"
08219328	DEFROST TERMINATION / FAN DELAY, SPST, O35/C55
Electric Defrost Models	
Models *L6E035, *L6E042, *L6E049, *L4E027, *L4E032, *L4E038	
08215200	COIL HEATER, 1F, 230V, 375 WATTS
08215206	DRAIN PAN HEATER, 1F, 230V, 375 WATTS
08215212	DRAIN PAN HEATER, 1F, 460V, 375 WATTS
Models *L6E066, *L6E077, *L6E090, *L6E105, *L4E051, *L4E064, *L4E080	
08215201	COIL HEATER, 2F, 230V, 750 WATTS
08215207	DRAIN PAN HEATER, 2F, 230V, 750 WATTS
08215213	DRAIN PAN HEATER, 2F, 460V, 750 WATTS
Models *L6E121, *L4E094, *L6E142, *L4E110	
08215202	COIL HEATER, 3F, 230V, 1100 WATTS
08215208	DRAIN PAN HEATER, 3F, 230V, 1100 WATTS
08215214	DRAIN PAN HEATER, 3F, 460V, 1100 WATTS
Models *L6E162, *L4E125, *L6E182, *L4E141	
08215203	COIL HEATER, 4F, 230V 1475 WATTS
08215209	DRAIN PAN HEATER, 4F, 230V, 1475 WATTS
08215215	DRAIN PAN HEATER, 4F, 460V, 1475 WATTS
Models *L6E200, *L4E155	
08215204	COIL HEATER, 5F, 230V 1850 WATTS
08215210	DRAIN PAN HEATER, 5F, 230V, 1850 WATTS
08215216	DRAIN PAN HEATER, 5F, 460V, 1850 WATTS
Models *L6E244, *L4E195, *L6E281, *L4E230	
08215205	COIL HEATER, 6F, 230V 2225 WATTS
08215211	DRAIN PAN HEATER, 6F, 230V, 2225 WATTS
08215217	DRAIN PAN HEATER, 6F, 460V, 2225 WATTS

Notes:

* Variable for brand character (R = Russell, K = Kramer, W = Witt, C = ColdZone).

The Heater voltage will line up with the voltage code in the model number. Each unit will get 3 heaters (2 on the face of the coil and 1 in the drain pan). 460V units include (2) 230V face heaters wired in series. The drain pan contains a single 460V heater.

Continued on next page

Next-Gen All-Temp Low Profile Unit Coolers

Next-Gen All-Temp Replacement Parts Cont.

Part Number	Description
Hot Gas Defrost Models	
Models *L6G035, *L6G042, *LG049, *L4G027, *L4G032, *L4G038, *L6H035, *L6H042, *LH049, *L4H027, *L4H032, *L4H038	
08530726	DRAIN PAN HEATER, 1F, 115V, 375 WATTS
08215206	DRAIN PAN HEATER, 1F, 230V, 375 WATTS
08215212	DRAIN PAN HEATER, 1F, 460V, 375 WATTS
Models *L6G066, *L6G077, *L6G090, *L6G105, *L4G051, *L4G064, *L4G080, *L6H066, *L6H077, *L6H090, *L6H105, *L4H051, *L4H064, *L4H080	
08530727	DRAIN PAN HEATER, 2F, 115V, 750 WATTS
08215207	DRAIN PAN HEATER, 2F, 230V, 750 WATTS
08215213	DRAIN PAN HEATER, 2F, 460V, 750 WATTS
Models *L6G121, *L4G094, *L6G142, *L4G110, *L6H121, *L4H094, *L6H142, *L4H110	
08530728	DRAIN PAN HEATER, 3F, 115V, 1100 WATTS
08215208	DRAIN PAN HEATER, 3F, 230V, 1100 WATTS
08215214	DRAIN PAN HEATER, 3F, 460V, 1100 WATTS

Part Number	Description
Models *L6G162, *L4G125, *L6G182, *L4G141, *L6H162, *L4H125, *L6H182, *L4H141	
08530729	DRAIN PAN HEATER, 4F, 115V, 1475 WATTS
08215209	DRAIN PAN HEATER, 4F, 230V, 1475 WATTS
08215215	DRAIN PAN HEATER, 4F, 460V, 1475 WATTS
Models *L6G200, *L4G155, *L6H200, *L4H155	
08530730	DRAIN PAN HEATER, 5F, 115V, 1850 WATTS
08215210	DRAIN PAN HEATER, 5F, 230V, 1850 WATTS
08215216	DRAIN PAN HEATER, 5F, 460V, 1850 WATTS
Models *L6G244, *L4G195, *L6G281, *L4G230, *L6H244, *L4H195, *L6H281, *L4H230	
08530731	DRAIN PAN HEATER, 6F, 115V, 2225 WATTS
08215211	DRAIN PAN HEATER, 6F, 230V, 2225 WATTS
08215217	DRAIN PAN HEATER, 6F, 460V, 2225 WATTS

Notes:

* Variable for brand character (R = Russell, K = Kramer, W = Witt, C = ColdZone).

The Heater voltage will line up with the voltage code in the model number. Each unit will get 3 heaters (2 on the face of the coil and 1 in the drain pan). 460V units include (2) 230V face heaters wired in series. The drain pan contains a single 460V heater.

TO INQUIRE OR ORDER REPLACEMENT PARTS

Email: parts@htpg.com

Telephone: 1-855-HTPARTS

(1-855-487-2787)

Fax: (256) 259-7478

1. Provide the complete Model Number and Serial Number of the unit.
2. Provide a detailed description of the part with any model, diameter, HP, or other markings.
3. State the quantity you are ordering.
4. Advise special shipping methods, routes, procedures, or instructions with ship to address.
5. Provide complete and accurate data to insure prompt and accurate delivery.

Due to continuing product development, specifications are subject to change without notice.



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