

INSTALLATION INSTRUCTIONS

PACKAGE AIR CONDITIONERS

RLNL-B/RLNL-C SERIES 6, 7.5, 8.5, 10 & 12.5 TON [21.1, 26.4, 29.9, 35.2 & 44 kW]

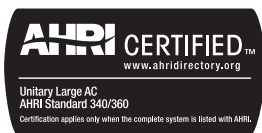
RLNL-H SERIES 7.5, 8.5, 10 & 12.5 TON [26.4, 29.9, 35.2 & 44kW]

60 HZ MODELS

RLNL-B: ASHRAE 90.1 2007 COMPLIANT

RLNL-C: ASHRAE 90.1 2007 COMPLIANT, WITH CLEAR CONTROL

RLNL-H: ASHRAE 90.1 2010 COMPLIANT, WITH CLEAR CONTROL AND VFD



Recognize this symbol as an indication of Important Safety Information!

DO NOT DESTROY
PLEASE READ CAREFULLY AND KEEP IN A SAFE PLACE
FOR FUTURE REFERENCE.

WARNING

THESE INSTRUCTIONS ARE INTENDED AS AN AID TO QUALIFIED, LICENSED SERVICE PERSONNEL FOR PROPER INSTALLATION, ADJUSTMENT AND OPERATION OF THIS UNIT. READ THESE INSTRUCTIONS THOROUGHLY BEFORE ATTEMPTING INSTALLATION OR OPERATION. FAILURE TO FOLLOW THESE INSTRUCTIONS MAY RESULT IN IMPROPER INSTALLATION, ADJUSTMENT, SERVICE OR MAINTENANCE POSSIBLY RESULTING IN FIRE, ELECTRICAL SHOCK, PROPERTY DAMAGE, PERSONAL INJURY OR DEATH.



[] Designates Metric Conversions

92-23577-82-06
SUPERSEDES 92-23577-82-05

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II. INTRODUCTION

▲ WARNING

THE MANUFACTURER'S WARRANTY DOES NOT COVER ANY DAMAGE OR DEFECT TO THE AIR CONDITIONER CAUSED BY THE ATTACHMENT OR USE OF ANY COMPONENTS, ACCESSORIES OR DEVICES (OTHER THAN THOSE AUTHORIZED BY THE MANUFACTURER) INTO, ONTO OR IN CONJUNCTION WITH THE AIR CONDITIONER. YOU SHOULD BE AWARE THAT THE USE OF UNAUTHORIZED COMPONENTS, ACCESSORIES OR DEVICES MAY ADVERSELY AFFECT THE OPERATION OF THE AIR CONDITIONER AND MAY ALSO ENDANGER LIFE AND PROPERTY. THE MANUFACTURER DISCLAIMS ANY RESPONSIBILITY FOR SUCH LOSS OR INJURY RESULTING FROM THE USE OF SUCH UNAUTHORIZED COMPONENTS, ACCESSORIES OR DEVICES.

This booklet contains the installation and operating instructions for your air conditioner. There are a few precautions that should be taken to derive maximum satisfaction from it. Improper installation can result in unsatisfactory operation or dangerous conditions.

Read this booklet and any instructions packaged with separate equipment required to make up the system prior to installation. Give this booklet to the owner and explain its provisions. The owner should retain this booklet for future reference.

III. CHECKING PRODUCT RECEIVED

Upon receiving the unit, inspect it for any damage from shipment. Claims for damage, either shipping or concealed, should be filed immediately with the shipping company. Check the unit model number, heating size, electrical characteristics, and accessories to determine if they are correct.

IV. EQUIPMENT PROTECTION FROM THE ENVIRONMENT

The metal parts of this unit may be subject to rust or deterioration in adverse environmental conditions. This oxidation could shorten the equipment's useful life. Salt spray, fog or mist in seacoast areas, sulphur or chlorine from lawn watering systems, and various chemical contaminants from industries such as paper mills and petroleum refineries are especially corrosive.

If the unit is to be installed in an area where contaminants are likely to be a problem, special attention should be given to the equipment location and exposure.

1. Avoid having lawn sprinkler heads spray direction on the unit cabinet.
2. In coastal areas, locate the unit on the side of the building away from the waterfront.
3. Shielding provided by a fence or shrubs may give some protection.

Regular maintenance will reduce the buildup of contaminants and help to protect the unit's finish.

▲ WARNING

DISCONNECT ALL POWER TO THE UNIT BEFORE STARTING MAINTENANCE. FAILURE TO DO SO CAN RESULT IN SEVERE ELECTRICAL SHOCK OR DEATH.

1. Frequent washing of the cabinet, fan blade and coil with fresh water will remove most of the salt or other contaminants that build up on the unit.
2. Regular cleaning and waxing of the cabinet with a good automobile polish will provide some protection.
3. A good liquid cleaner may be used several times a year to remove matter that will not wash off with water.

Several different types of protective coatings are offered in some areas. These coatings may provide some benefit, but the effectiveness of such coating materials cannot be verified by the equipment manufacturer.

The best protection is frequent cleaning, maintenance and minimal exposure to contaminants.

V. SPECIFICATIONS

A. GENERAL

The Packaged Air Conditioner is available without heat or with 10, 15, 20, 30, 40 or 50 kW electric heat. Cooling capacities of 6, 7½, 8½, 10 and 12½ nominal tons of cooling are available. Units are convertible from horizontal supply and return to bottom supply and return by relocation of supply and return air access panels. See cover installation detail.

The units are weatherized for mounting outside of the building.

The information on the rating plate is in compliance with the FTC and DOE rating for single phase units. The following information is for three phase units which **are not** covered under the DOE certification program.

1. The efficiency rating of this unit is a product thermal efficiency rating determined under continuous operating conditions independent of any installed system.

B. MAJOR COMPONENTS

The unit includes a hermetically-sealed refrigerating system (consisting of a compressor, condenser coil, evaporator coil with thermal expansion valve), a circulation air blower, a condenser fan, and all necessary internal electrical wiring. The cooling system of these units is factory-evacuated, charged and performance tested. Refrigerant amount and type are indicated on rating plate.

C. R-410A REFRIGERANT

All units are factory charged with R-410A refrigerant.

1. Specification of R-410A:

Application: R-410A is not a drop-in replacement for R-22; equipment designs must accommodate its higher pressures. It cannot be retrofitted into R-22 units.

Pressure: The pressure of R-410A is approximately 60% (1.6 times) greater than R-22. Recovery and recycle equipment, pumps, hoses and the like need to have design pressure ratings appropriate for R-410A. *Manifold sets need to range up to 800 psig high-side and 250 psig low-side with a 550 psig low-side retard. Hoses need to have a service pressure rating of 800 psig. Recovery cylinders need to have a 400 psig service pressure rating.* DOT 4BA400 or DOT BW400.

Combustibility: At pressures above 1 atmosphere, mixture of R-410A and air can become combustible. **R-410A and air should never be mixed in tanks or supply lines, or be allowed to accumulate in storage tanks. Leak checking should never be done with a mixture of R-410A and air.** Leak checking can be performed safely with nitrogen or a mixture of R-410A and nitrogen.

2. Quick Reference Guide For R-410A

- R-410A refrigerant operates at approximately 60% higher pressure (1.6 times) than R-22. Ensure that servicing equipment is designed to operate with R-410A.

- R-410A refrigerant cylinders are pink.
- R-410A, as with other HFC's is only compatible with POE oils.
- Vacuum pumps will not remove moisture from POE oil.
- R-410A systems are to be charged with liquid refrigerants. Prior to March 1999, R-410A refrigerant cylinders had a dip tube. These cylinders should be kept upright for equipment charging. Post March 1999 cylinders do not have a dip tube and should be inverted to ensure liquid charging of the equipment.
- Do not install a suction line filter drier in the liquid line.
- A liquid line filter drier is standard on every unit.
- Desiccant (drying agent) must be compatible for POE oils and R-410A.

3. Evaporator Coil / TXV

The thermostatic expansion valve is specifically designed to operate with R-410A. **DO NOT use an R-22 TXV. The existing evaporator must be replaced with the factory specified TXV evaporator specifically designed for R-410A.**

4. Tools Required For Installing & Servicing R-410A Models

Manifold Sets:

- Up to 800 PSIG High side
- Up to 250 PSIG Low Side
- 550 PSIG Low Side Retard

Manifold Hoses:

- Service Pressure Rating of 800 PSIG

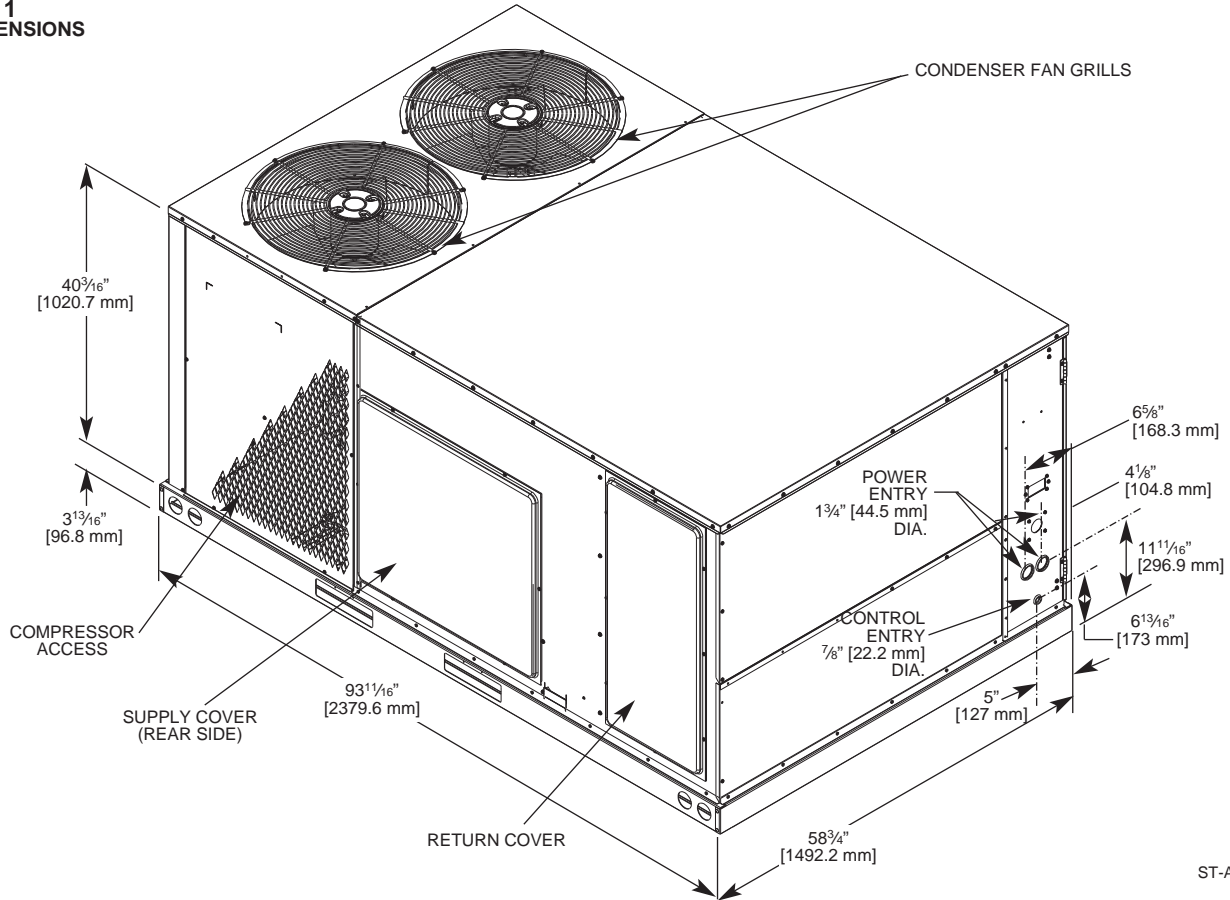
Recovery Cylinders:

- 400 PSIG Pressure Rating
- Dept. of Transportation 4BA400 or BW400

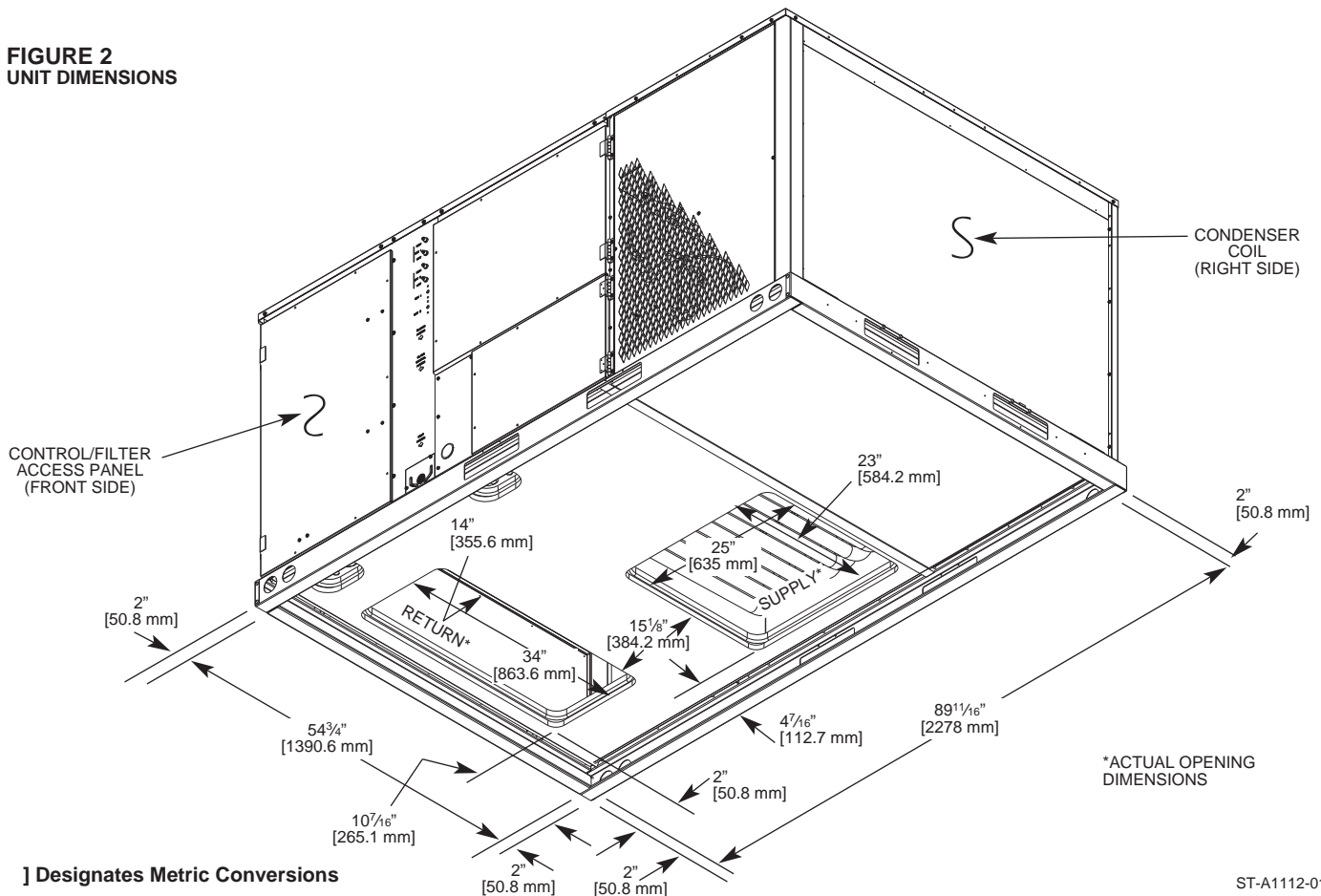
▲ CAUTION

R-410A systems operate at higher pressures than R-22 systems. Do not use R-22 service equipment or components on R-410A equipment.

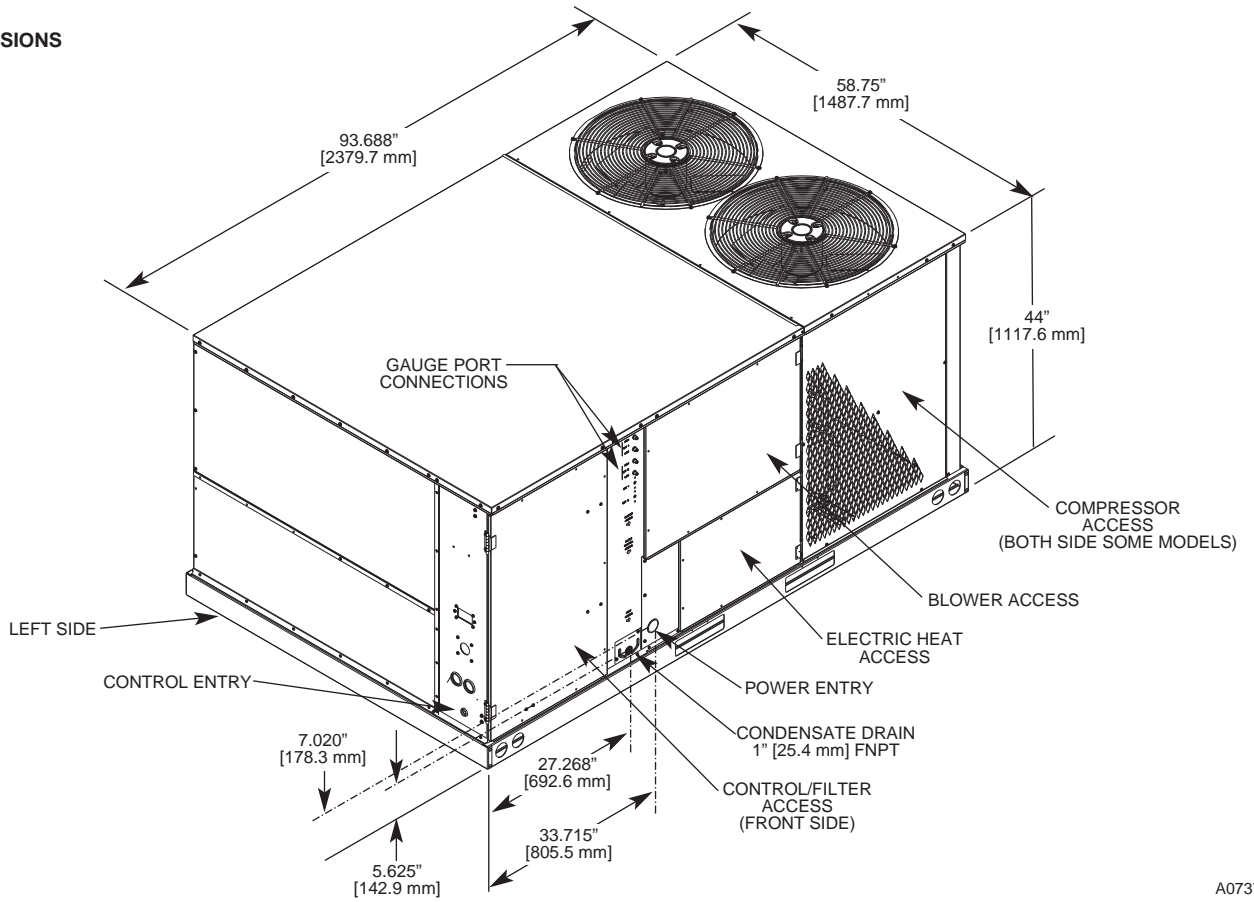
**FIGURE 1
UNIT DIMENSIONS**



**FIGURE 2
UNIT DIMENSIONS**



**FIGURE 3
UNIT DIMENSIONS**



**FIGURE 4
BOTTOM VIEW**

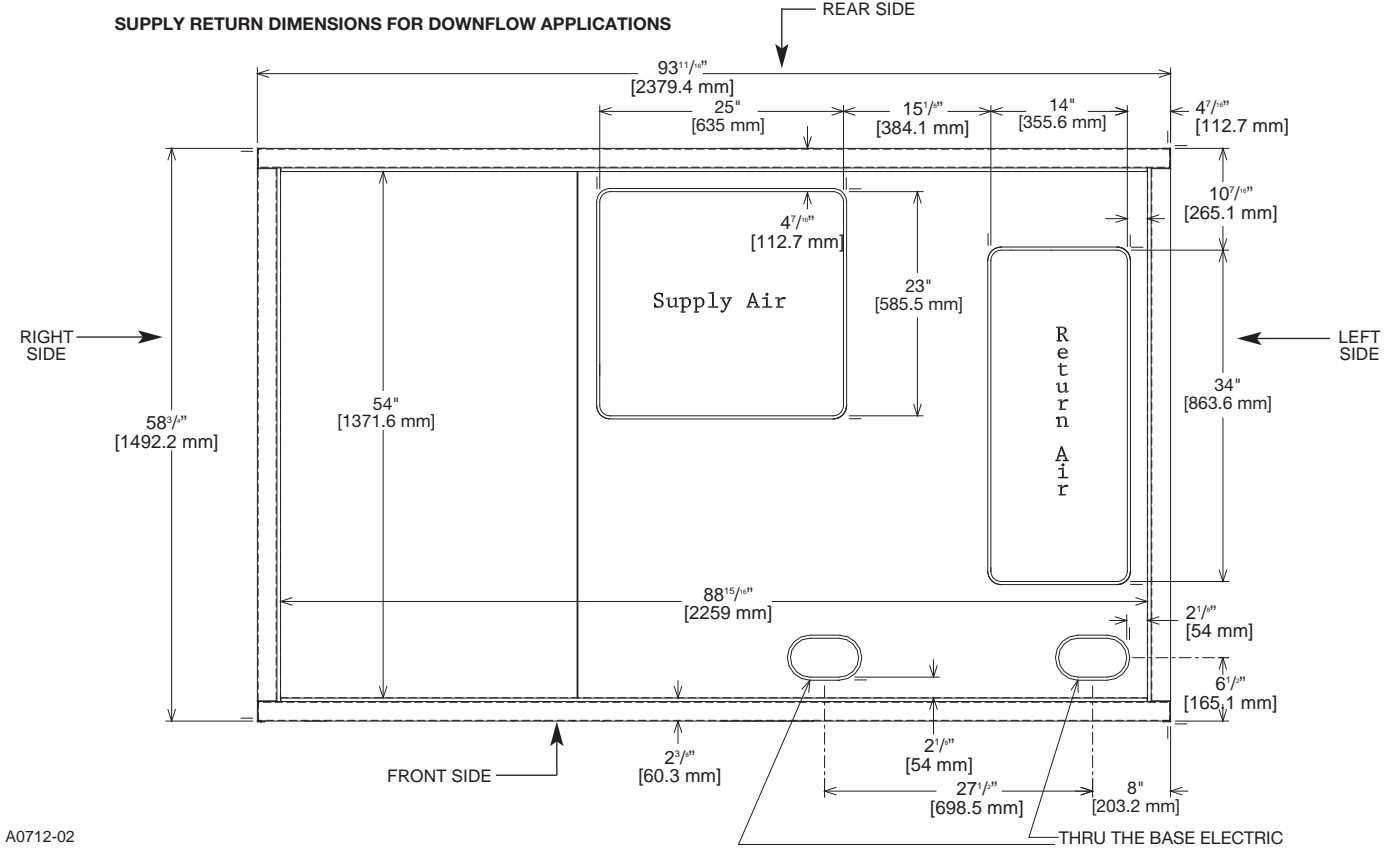
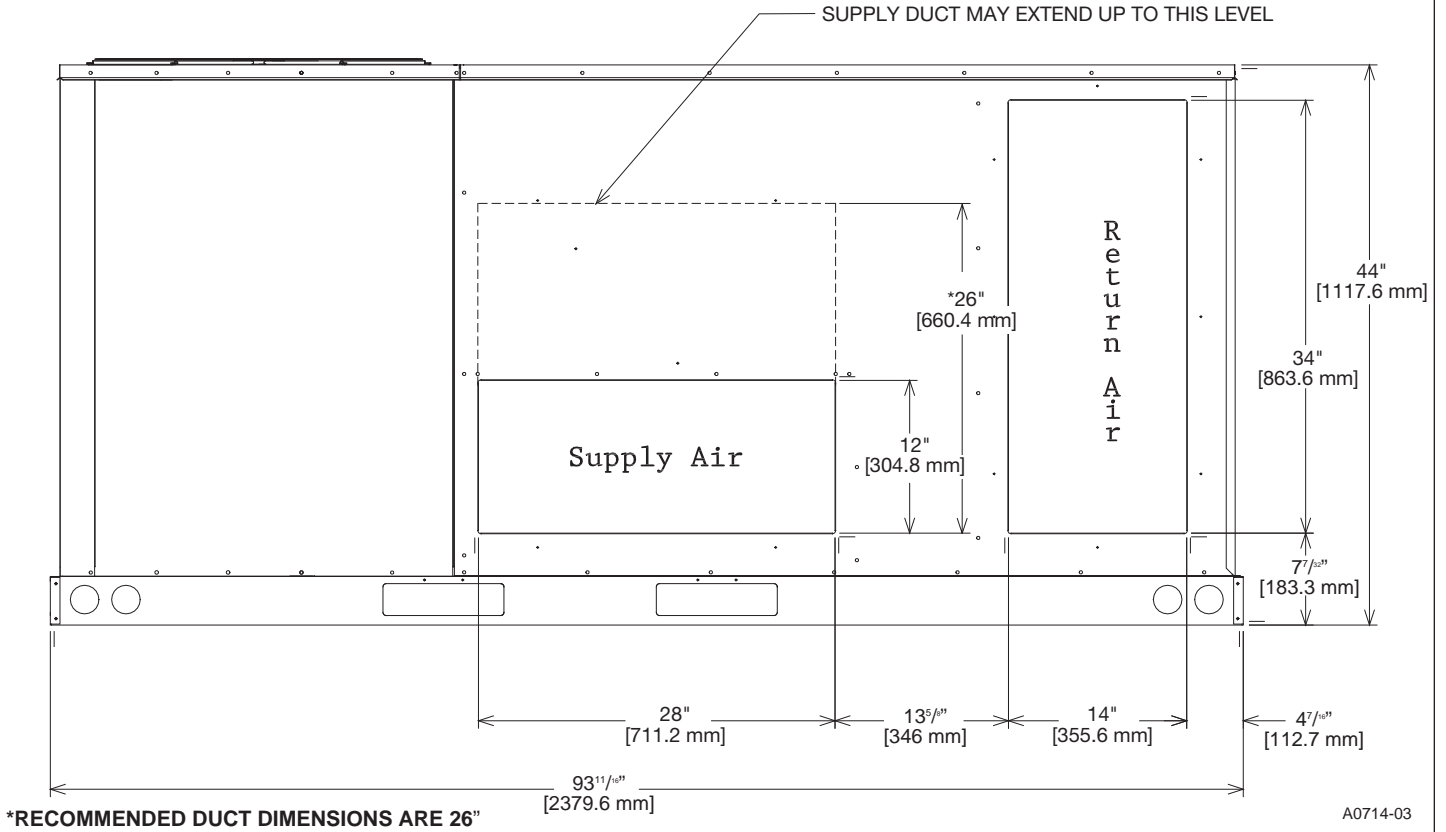


FIGURE 5
REAR VIEW

SUPPLY AND RETURN DIMENSIONS FOR HORIZONTAL APPLICATION



GENERAL DATA - RLNL

NOM. SIZES 6-12½ TONS [21.1-43.9 kW]

Model RLNL-Series	(B,C)073CL	(B,C)073CM	(B,C)073DL	(B,C)073DM
Cooling Performance¹				CONTINUED →
Gross Cooling Capacity Btu [kW]	75,000 [21.97]	75,000 [21.97]	75,000 [21.97]	75,000 [21.97]
EER/SEER ²	11.2/NA	11.2/NA	11.2/NA	11.2/NA
Nominal CFM/AHRI Rated CFM [L/s]	2400/2325 [1133/1097]	2400/2325 [1133/1097]	2400/2325 [1133/1097]	2400/2325 [1133/1097]
AHRI Net Cooling Capacity Btu [kW]	72,000 [21.1]	72,000 [21.1]	72,000 [21.1]	72,000 [21.1]
Net Sensible Capacity Btu [kW]	52,800 [15.47]	52,800 [15.47]	52,800 [15.47]	52,800 [15.47]
Net Latent Capacity Btu [kW]	19,200 [5.63]	19,200 [5.63]	19,200 [5.63]	19,200 [5.63]
IEER ³	11.8	11.8	11.8	11.8
Net System Power kW	6.42	6.42	6.42	6.42
Compressor				
No./Type	1/Scroll	1/Scroll	1/Scroll	1/Scroll
Outdoor Sound Rating (dB)⁵	88	88	88	88
Outdoor Coil—Fin Type	Louvered	Louvered	Louvered	Louvered
Tube Type	Rifled	Rifled	Rifled	Rifled
Tube Size in. [mm] OD	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]
Face Area sq. ft. [sq. m]	13.5 [1.25]	13.5 [1.25]	13.5 [1.25]	13.5 [1.25]
Rows / FPI [FPcm]	1 / 22 [9]	1 / 22 [9]	1 / 22 [9]	1 / 22 [9]
Indoor Coil—Fin Type	Louvered	Louvered	Louvered	Louvered
Tube Type	Rifled	Rifled	Rifled	Rifled
Tube Size in. [mm]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]
Face Area sq. ft. [sq. m]	13.5 [1.25]	13.5 [1.25]	13.5 [1.25]	13.5 [1.25]
Rows / FPI [FPcm]	2 / 18 [7]	2 / 18 [7]	2 / 18 [7]	2 / 18 [7]
Refrigerant Control	TX Valves	TX Valves	TX Valves	TX Valves
Drain Connection No./Size in. [mm]	1/1 [25.4]	1/1 [25.4]	1/1 [25.4]	1/1 [25.4]
Outdoor Fan—Type	Propeller	Propeller	Propeller	Propeller
No. Used/Diameter in. [mm]	2/24 [609.6]	2/24 [609.6]	2/24 [609.6]	2/24 [609.6]
Drive Type/No. Speeds	Direct/1	Direct/1	Direct/1	Direct/1
CFM [L/s]	8000 [3775]	8000 [3775]	8000 [3775]	8000 [3775]
No. Motors/HP	2 at 1/3 HP	2 at 1/3 HP	2 at 1/3 HP	2 at 1/3 HP
Motor RPM	1075	1075	1075	1075
Indoor Fan—Type	FC Centrifugal	FC Centrifugal	FC Centrifugal	FC Centrifugal
No. Used/Diameter in. [mm]	1/11x12 [279x305]	1/11x12 [279x305]	1/11x12 [279x305]	1/11x12 [279x305]
Drive Type	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)
No. Speeds	Single	Single	Single	Single
No. Motors	1	1	1	1
Motor HP	1 1/2	1 1/2	1 1/2	1 1/2
Motor RPM	1725	1725	1725	1725
Motor Frame Size	56	56	56	56
Filter—Type	Disposable	Disposable	Disposable	Disposable
Furnished	Yes	Yes	Yes	Yes
(No.) Size Recommended in. [mm x mm x mm]	(6)2x18x18 [51x457x457]	(6)2x18x18 [51x457x457]	(6)2x18x18 [51x457x457]	(6)2x18x18 [51x457x457]
Refrigerant Charge Oz. [g]	125 [3544]	125 [3544]	125 [3544]	125 [3544]
Weights				
Net Weights lbs. [kg]	901 [409]	901 [409]	901 [409]	901 [409]
Ship Weights lbs. [kg]	938 [425]	938 [425]	938 [425]	938 [425]

GENERAL DATA - RLNL

NOM. SIZES 6-12½ TONS [21.1-43.9 kW]

Model RLNL-Series Model RLNL-Series (with VFD)	(B,C)073YL	(B,C)073YM	(B,C)090CL H090CR	(B,C)090CM H090CS
Cooling Performance¹				CONTINUED →
Gross Cooling Capacity Btu [kW]	75,000 [21.97]	75,000 [21.97]	93,000 [27.25]	93,000 [27.25]
EER/SEER ²	11.2/NA	11.2/NA	11.2/NA	11.2/NA
Nominal CFM/AHRI Rated CFM [L/s]	2400/2325 [1133/1097]	2400/2325 [1133/1097]	3000/2775 [1416/1310]	3000/2775 [1416/1310]
AHRI Net Cooling Capacity Btu [kW]	72,000 [21.1]	72,000 [21.1]	90,000 [26.37]	90,000 [26.37]
Net Sensible Capacity Btu [kW]	52,800 [15.47]	52,800 [15.47]	63,100 [18.49]	63,100 [18.49]
Net Latent Capacity Btu [kW]	19,200 [5.63]	19,200 [5.63]	26,900 [7.88]	26,900 [7.88]
IEER ³ (Standard/VFD)	11.8	11.8	11.9/14.5	11.9/14.5
Net System Power kW	6.42	6.42	7.99	7.99
Compressor				
No./Type	1/Scroll	1/Scroll	2/Scroll	2/Scroll
Outdoor Sound Rating (dB)⁵	88	88	88	88
Outdoor Coil—Fin Type	Louvered	Louvered	Louvered	Louvered
Tube Type	Rifled	Rifled	Rifled	Rifled
Tube Size in. [mm] OD	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]
Face Area sq. ft. [sq. m]	13.5 [1.25]	13.5 [1.25]	27 [2.51]	27 [2.51]
Rows / FPI [FPcm]	1 / 22 [9]	1 / 22 [9]	1 / 22 [9]	1 / 22 [9]
Indoor Coil—Fin Type	Louvered	Louvered	Louvered	Louvered
Tube Type	Rifled	Rifled	Rifled	Rifled
Tube Size in. [mm]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]
Face Area sq. ft. [sq. m]	13.5 [1.25]	13.5 [1.25]	13.5 [1.25]	13.5 [1.25]
Rows / FPI [FPcm]	2 / 18 [7]	2 / 18 [7]	2 / 18 [7]	2 / 18 [7]
Refrigerant Control	TX Valves	TX Valves	TX Valves	TX Valves
Drain Connection No./Size in. [mm]	1/1 [25.4]	1/1 [25.4]	1/1 [25.4]	1/1 [25.4]
Outdoor Fan—Type	Propeller	Propeller	Propeller	Propeller
No. Used/Diameter in. [mm]	2/24 [609.6]	2/24 [609.6]	2/24 [609.6]	2/24 [609.6]
Drive Type/No. Speeds	Direct/1	Direct/1	Direct/1	Direct/1
CFM [L/s]	8000 [3775]	8000 [3775]	8000 [3775]	8000 [3775]
No. Motors/HP	2 at 1/3 HP	2 at 1/3 HP	2 at 1/3 HP	2 at 1/3 HP
Motor RPM	1075	1075	1075	1075
Indoor Fan—Type	FC Centrifugal	FC Centrifugal	FC Centrifugal	FC Centrifugal
No. Used/Diameter in. [mm]	1/11x12 [279x305]	1/11x12 [279x305]	1/15x15 [381x381]	1/15x15 [381x381]
Drive Type	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)
No. Speeds	Single	Single	Single / Multiple	Single / Multiple
No. Motors	1	1	1	1
Motor HP	1 1/2	1 1/2	2	2
Motor RPM	1725	1725	1725	1725
Motor Frame Size	56	56	56	56
Filter—Type	Disposable	Disposable	Disposable	Disposable
Furnished	Yes	Yes	Yes	Yes
(No.) Size Recommended in. [mm x mm x mm]	(6)2x18x18 [51x457x457]	(6)2x18x18 [51x457x457]	(6)2x18x18 [51x457x457]	(6)2x18x18 [51x457x457]
Refrigerant Charge Oz. [g]	125 [3544]	125 [3544]	107.5/110.7 [3048/3138]	107.5/110.7 [3048/3138]
Weights				
Net Weights lbs. [kg]	901 [409]	901 [409]	1017 [461]	1017 [461]
Ship Weights lbs. [kg]	938 [425]	938 [425]	1054 [478]	1054 [478]

GENERAL DATA - RLNL

NOM. SIZES 6-12½ TONS [21.1-43.9 kW]

Model RLNL-Series Model RLNL-Series (with VFD)	(B,C)090CN H090CT	(B,C)090DL H090DR	(B,C)090DM H090DS	(B,C)090DN H090DT
Cooling Performance¹				CONTINUED →
Gross Cooling Capacity Btu [kW]	93,000 [27.25]	93,000 [27.25]	93,000 [27.25]	93,000 [27.25]
EER/SEER ²	11.2/NA	11.2/NA	11.2/NA	11.2/NA
Nominal CFM/ARI Rated CFM [L/s]	3000/2775 [1416/1310]	3000/2775 [1416/1310]	3000/2775 [1416/1310]	3000/2775 [1416/1310]
ARI Net Cooling Capacity Btu [kW]	90,000 [26.37]	90,000 [26.37]	90,000 [26.37]	90,000 [26.37]
Net Sensible Capacity Btu [kW]	63,100 [18.49]	63,100 [18.49]	63,100 [18.49]	63,100 [18.49]
Net Latent Capacity Btu [kW]	26,900 [7.88]	26,900 [7.88]	26,900 [7.88]	26,900 [7.88]
IEER ³ (Standard/VFD)	11.9/14.5	11.9/14.5	11.9/14.5	11.9/14.5
Net System Power kW	7.99	7.99	7.99	7.99
Compressor				
No./Type	2/Scroll	2/Scroll	2/Scroll	2/Scroll
Outdoor Sound Rating (dB)⁵	88	88	88	88
Outdoor Coil—Fin Type	Louvered	Louvered	Louvered	Louvered
Tube Type	Rifled	Rifled	Rifled	Rifled
Tube Size in. [mm] OD	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]
Face Area sq. ft. [sq. m]	27 [2.51]	27 [2.51]	27 [2.51]	27 [2.51]
Rows / FPI [FPcm]	1 / 22 [9]	1 / 22 [9]	1 / 22 [9]	1 / 22 [9]
Indoor Coil—Fin Type	Louvered	Louvered	Louvered	Louvered
Tube Type	Rifled	Rifled	Rifled	Rifled
Tube Size in. [mm]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]
Face Area sq. ft. [sq. m]	13.5 [1.25]	13.5 [1.25]	13.5 [1.25]	13.5 [1.25]
Rows / FPI [FPcm]	2 / 18 [7]	2 / 18 [7]	2 / 18 [7]	2 / 18 [7]
Refrigerant Control	TX Valves	TX Valves	TX Valves	TX Valves
Drain Connection No./Size in. [mm]	1/1 [25.4]	1/1 [25.4]	1/1 [25.4]	1/1 [25.4]
Outdoor Fan—Type	Propeller	Propeller	Propeller	Propeller
No. Used/Diameter in. [mm]	2/24 [609.6]	2/24 [609.6]	2/24 [609.6]	2/24 [609.6]
Drive Type/No. Speeds	Direct/1	Direct/1	Direct/1	Direct/1
CFM [L/s]	8000 [3775]	8000 [3775]	8000 [3775]	8000 [3775]
No. Motors/HP	2 at 1/3 HP	2 at 1/3 HP	2 at 1/3 HP	2 at 1/3 HP
Motor RPM	1075	1075	1075	1075
Indoor Fan—Type	FC Centrifugal	FC Centrifugal	FC Centrifugal	FC Centrifugal
No. Used/Diameter in. [mm]	1/15x15 [381x381]	1/15x15 [381x381]	1/15x15 [381x381]	1/15x15 [381x381]
Drive Type	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)
No. Speeds	Single / Multiple	Single / Multiple	Single / Multiple	Single / Multiple
No. Motors	1	1	1	1
Motor HP	3	2	2	3
Motor RPM	1725	1725	1725	1725
Motor Frame Size	56	56	56	56
Filter—Type	Disposable	Disposable	Disposable	Disposable
Furnished	Yes	Yes	Yes	Yes
(No.) Size Recommended in. [mm x mm x mm]	(6)2x18x18 [51x457x457]	(6)2x18x18 [51x457x457]	(6)2x18x18 [51x457x457]	(6)2x18x18 [51x457x457]
Refrigerant Charge Oz. [g]	107.5/110.7 [3048/3138]	107.5/110.7 [3048/3138]	107.5/110.7 [3048/3138]	107.5/110.7 [3048/3138]
Weights				
Net Weights lbs. [kg]	1025 [465]	1017 [461]	1017 [461]	1025 [465]
Ship Weights lbs. [kg]	1054 [478]	1054 [478]	1054 [478]	1054 [478]

GENERAL DATA - RLNL

NOM. SIZES 6-12½ TONS [21.1-43.9 kW]

Model RLNL-Series Model RLNL-Series (with VFD)	(B,C)090YL	(B,C)090YM	(B,C)090YN	(B,C)102CL H102CR
Cooling Performance¹				CONTINUED →
Gross Cooling Capacity Btu [kW]	93,000 [27.25]	93,000 [27.25]	93,000 [27.25]	101,000 [29.59]
EER/SEER ²	11.2/NA	11.2/NA	11.2/NA	11.2/NA
Nominal CFM/ARI Rated CFM [L/s]	3000/2775 [1416/1310]	3000/2775 [1416/1310]	3000/2775 [1416/1310]	3200/3200 [1510/1510]
ARI Net Cooling Capacity Btu [kW]	90,000 [26.37]	90,000 [26.37]	90,000 [26.37]	97,000 [28.42]
Net Sensible Capacity Btu [kW]	63,100 [18.49]	63,100 [18.49]	63,100 [18.49]	74,000 [21.68]
Net Latent Capacity Btu [kW]	26,900 [7.88]	26,900 [7.88]	26,900 [7.88]	23,000 [6.74]
IEER ³ (Standard/VFD)	11.9	11.9	11.9	12/14.4
Net System Power kW	7.99	7.99	7.99	8.59
Compressor				
No./Type	2/Scroll	2/Scroll	2/Scroll	2/Scroll
Outdoor Sound Rating (dB)⁵	88	88	88	88
Outdoor Coil—Fin Type	Louvered	Louvered	Louvered	Louvered
Tube Type	Rifled	Rifled	Rifled	Rifled
Tube Size in. [mm] OD	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]
Face Area sq. ft. [sq. m]	27 [2.51]	27 [2.51]	27 [2.51]	27 [2.51]
Rows / FPI [FPcm]	1 / 22 [9]	1 / 22 [9]	1 / 22 [9]	2 / 18 [7]
Indoor Coil—Fin Type	Louvered	Louvered	Louvered	Louvered
Tube Type	Rifled	Rifled	Rifled	Rifled
Tube Size in. [mm]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]
Face Area sq. ft. [sq. m]	13.5 [1.25]	13.5 [1.25]	13.5 [1.25]	13.5 [1.25]
Rows / FPI [FPcm]	2 / 18 [7]	2 / 18 [7]	2 / 18 [7]	2 / 18 [7]
Refrigerant Control	TX Valves	TX Valves	TX Valves	TX Valves
Drain Connection No./Size in. [mm]	1/1 [25.4]	1/1 [25.4]	1/1 [25.4]	1/1 [25.4]
Outdoor Fan—Type	Propeller	Propeller	Propeller	Propeller
No. Used/Diameter in. [mm]	2/24 [609.6]	2/24 [609.6]	2/24 [609.6]	2/24 [609.6]
Drive Type/No. Speeds	Direct/1	Direct/1	Direct/1	Direct/1
CFM [L/s]	8000 [3775]	8000 [3775]	8000 [3775]	8000 [3775]
No. Motors/HP	2 at 1/3 HP	2 at 1/3 HP	2 at 1/3 HP	2 at 1/3 HP
Motor RPM	1075	1075	1075	1075
Indoor Fan—Type	FC Centrifugal	FC Centrifugal	FC Centrifugal	FC Centrifugal
No. Used/Diameter in. [mm]	1/15x15 [381x381]	1/15x15 [381x381]	1/15x15 [381x381]	1/15x15 [381x381]
Drive Type	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)
No. Speeds	Single	Single	Single / Multiple	Single / Multiple
No. Motors	1	1	1	1
Motor HP	2	2	3	2
Motor RPM	1725	1725	1725	1725
Motor Frame Size	56	56	56	56
Filter—Type	Disposable	Disposable	Disposable	Disposable
Furnished	Yes	Yes	Yes	Yes
(No.) Size Recommended in. [mm x mm x mm]	(6)2x18x18 [51x457x457]	(6)2x18x18 [51x457x457]	(6)2x18x18 [51x457x457]	(6)2x18x18 [51x457x457]
Refrigerant Charge Oz. [g]	107.5/110.7 [3048/3138]	107.5/110.7 [3048/3138]	107.5/110.7 [3048/3138]	154.4/166.6 [4377/4723]
Weights				
Net Weights lbs. [kg]	1017 [461]	1017 [461]	1025 [465]	1059 [480]
Ship Weights lbs. [kg]	1054 [478]	1054 [478]	1054 [478]	1096 [497]

GENERAL DATA - RLNL

NOM. SIZES 6-12½ TONS [21.1-43.9 kW]

Model RLNL-Series Model RLNL-Series (with VFD)	(B,C)102CM H102CS	(B,C)102DL H102DR	(B,C)102DM H102DS	(B,C)102YL
Cooling Performance¹				CONTINUED →
Gross Cooling Capacity Btu [kW]	101,000 [29.59]	101,000 [29.59]	101,000 [29.59]	101,000 [29.59]
EER/SEER ²	11.2/NA	11.2/NA	11.2/NA	11.2/NA
Nominal CFM/ARI Rated CFM [L/s]	3200/3200 [1510/1510]	3200/3200 [1510/1510]	3200/3200 [1510/1510]	3200/3200 [1510/1510]
ARI Net Cooling Capacity Btu [kW]	97,000 [28.42]	97,000 [28.42]	97,000 [28.42]	97,000 [28.42]
Net Sensible Capacity Btu [kW]	74,000 [21.68]	74,000 [21.68]	74,000 [21.68]	74,000 [21.68]
Net Latent Capacity Btu [kW]	23,000 [6.74]	23,000 [6.74]	23,000 [6.74]	23,000 [6.74]
IEER ³ (Standard/VFD)	12/14.4	12/14.4	12/14.4	12/14.4
Net System Power kW	8.59	8.59	8.59	8.59
Compressor				
No./Type	2/Scroll	2/Scroll	2/Scroll	2/Scroll
Outdoor Sound Rating (dB)⁵	88	88	88	88
Outdoor Coil—Fin Type	Louvered	Louvered	Louvered	Louvered
Tube Type	Rifled	Rifled	Rifled	Rifled
Tube Size in. [mm] OD	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]
Face Area sq. ft. [sq. m]	27 [2.51]	27 [2.51]	27 [2.51]	27 [2.51]
Rows / FPI [FPcm]	2 / 18 [7]	2 / 18 [7]	2 / 18 [7]	2 / 18 [7]
Indoor Coil—Fin Type	Louvered	Louvered	Louvered	Louvered
Tube Type	Rifled	Rifled	Rifled	Rifled
Tube Size in. [mm]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]
Face Area sq. ft. [sq. m]	13.5 [1.25]	13.5 [1.25]	13.5 [1.25]	13.5 [1.25]
Rows / FPI [FPcm]	2 / 18 [7]	2 / 18 [7]	2 / 18 [7]	2 / 18 [7]
Refrigerant Control	TX Valves	TX Valves	TX Valves	TX Valves
Drain Connection No./Size in. [mm]	1/1 [25.4]	1/1 [25.4]	1/1 [25.4]	1/1 [25.4]
Outdoor Fan—Type	Propeller	Propeller	Propeller	Propeller
No. Used/Diameter in. [mm]	2/24 [609.6]	2/24 [609.6]	2/24 [609.6]	2/24 [609.6]
Drive Type/No. Speeds	Direct/1	Direct/1	Direct/1	Direct/1
CFM [L/s]	8000 [3775]	8000 [3775]	8000 [3775]	8000 [3775]
No. Motors/HP	2 at 1/3 HP	2 at 1/3 HP	2 at 1/3 HP	2 at 1/3 HP
Motor RPM	1075	1075	1075	1075
Indoor Fan—Type	FC Centrifugal	FC Centrifugal	FC Centrifugal	FC Centrifugal
No. Used/Diameter in. [mm]	1/15x15 [381x381]	1/15x15 [381x381]	1/15x15 [381x381]	1/15x15 [381x381]
Drive Type	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)
No. Speeds	Single / Multiple	Single / Multiple	Single / Multiple	Single
No. Motors	1	1	1	1
Motor HP	3	2	3	2
Motor RPM	1725	1725	1725	1725
Motor Frame Size	56	56	56	56
Filter—Type	Disposable	Disposable	Disposable	Disposable
Furnished	Yes	Yes	Yes	Yes
(No.) Size Recommended in. [mm x mm x mm]	(6)2x18x18 [51x457x457]	(6)2x18x18 [51x457x457]	(6)2x18x18 [51x457x457]	(6)2x18x18 [51x457x457]
Refrigerant Charge Oz. [g]	154.4/166.6 [4377/4723]	154.4/166.6 [4377/4723]	154.4/166.6 [4377/4723]	154.4/166.6 [4372/4723]
Weights				
Net Weights lbs. [kg]	1067 [484]	1059 [480]	1067 [484]	1059 [480]
Ship Weights lbs. [kg]	1096 [497]	1096 [497]	1096 [497]	1096 [497]

GENERAL DATA - RLNL

NOM. SIZES 6-12½ TONS [21.1-43.9 kW]

Model RLNL-Series Model RLNL-Series (with VFD)	(B,C)102YM	(B,C)120CL H120CR	(B,C)120CM H120CS	(B,C)120DL H120DR
Cooling Performance¹				CONTINUED →
Gross Cooling Capacity Btu [kW]	101,000 [29.59]	123,000 [36.04]	123,000 [36.04]	123,000 [36.04]
EER/SEER ²	11.2/NA	11.2/NA	11.2/NA	11.2/NA
Nominal CFM/ARI Rated CFM [L/s]	3200/3200 [1510/1510]	4000/3750 [1888/1770]	4000/3750 [1888/1770]	4000/3750 [1888/1770]
ARI Net Cooling Capacity Btu [kW]	97,000 [28.42]	118,000 [34.57]	118,000 [34.57]	118,000 [34.57]
Net Sensible Capacity Btu [kW]	74,000 [21.68]	88,800 [26.02]	88,800 [26.02]	88,800 [26.02]
Net Latent Capacity Btu [kW]	23,000 [6.74]	29,200 [8.56]	29,200 [8.56]	29,200 [8.56]
IEER ³ (Standard/VFD)	12	11.9/14.6	11.9/14.6	11.9/14.6
Net System Power kW	8.59	10.49	10.49	10.49
Compressor				
No./Type	2/Scroll	2/Scroll	2/Scroll	2/Scroll
Outdoor Sound Rating (dB)⁵	88	88	88	88
Outdoor Coil—Fin Type	Louvered	Louvered	Louvered	Louvered
Tube Type	Rifled	Rifled	Rifled	Rifled
Tube Size in. [mm] OD	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]
Face Area sq. ft. [sq. m]	27 [2.51]	27 [2.51]	27 [2.51]	27 [2.51]
Rows / FPI [FPcm]	2 / 18 [7]	2 / 22 [9]	2 / 22 [9]	2 / 22 [9]
Indoor Coil—Fin Type	Louvered	Louvered	Louvered	Louvered
Tube Type	Rifled	Rifled	Rifled	Rifled
Tube Size in. [mm]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]
Face Area sq. ft. [sq. m]	13.5 [1.25]	13.5 [1.25]	13.5 [1.25]	13.5 [1.25]
Rows / FPI [FPcm]	2 / 18 [7]	3 / 18 [7]	3 / 18 [7]	3 / 18 [7]
Refrigerant Control	TX Valves	TX Valves	TX Valves	TX Valves
Drain Connection No./Size in. [mm]	1/1 [25.4]	1/1 [25.4]	1/1 [25.4]	1/1 [25.4]
Outdoor Fan—Type	Propeller	Propeller	Propeller	Propeller
No. Used/Diameter in. [mm]	2/24 [609.6]	2/24 [609.6]	2/24 [609.6]	2/24 [609.6]
Drive Type/No. Speeds	Direct/1	Direct/1	Direct/1	Direct/1
CFM [L/s]	8000 [3775]	8000 [3775]	8000 [3775]	8000 [3775]
No. Motors/HP	2 at 1/3 HP	2 at 1/3 HP	2 at 1/3 HP	2 at 1/3 HP
Motor RPM	1075	1075	1075	1075
Indoor Fan—Type	FC Centrifugal	FC Centrifugal	FC Centrifugal	FC Centrifugal
No. Used/Diameter in. [mm]	1/15x15 [381x381]	1/15x15 [381x381]	1/15x15 [381x381]	1/15x15 [381x381]
Drive Type	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)
No. Speeds	Single	Single / Multiple	Single / Multiple	Single / Multiple
No. Motors	1	1	1	1
Motor HP	3	2	3	2
Motor RPM	1725	1725	1725	1725
Motor Frame Size	56	56	56	56
Filter—Type	Disposable	Disposable	Disposable	Disposable
Furnished	Yes	Yes	Yes	Yes
(No.) Size Recommended in. [mm x mm x mm]	(6)2x18x18 [51x457x457]	(6)2x18x18 [51x457x457]	(6)2x18x18 [51x457x457]	(6)2x18x18 [51x457x457]
Refrigerant Charge Oz. [g]	154.4/166.6 [4372/4723]	172.8/180.8 [4899/5126]	172.8/180.8 [4899/5126]	172.8/180.8 [4899/5126]
Weights				
Net Weights lbs. [kg]	1059 [480]	1112 [504]	1120 [508]	1112 [504]
Ship Weights lbs. [kg]	1096 [497]	1149 [521]	1149 [521]	1149 [521]

GENERAL DATA - RLNL

NOM. SIZES 6-12½ TONS [21.1-43.9 kW]

Model RLNL-Series Model RLNL-Series (with VFD)	(B,C)120DM H120DS	(B,C)120YL	(B,C)120YM	(B,C)151CL H151CR
Cooling Performance¹				CONTINUED →
Gross Cooling Capacity Btu [kW]	123,000 [36.04]	123,000 [36.04]	123,000 [36.04]	146,000 [45.71]
EER/SEER ²	11.2/NA	11.2/NA	11.2/NA	11/NA
Nominal CFM/ARI Rated CFM [L/s]	4000/3750 [1888/1770]	4000/3750 [1888/1770]	4000/3750 [1888/1770]	5000/4225 [2360/1994]
ARI Net Cooling Capacity Btu [kW]	118,000 [34.57]	118,000 [34.57]	118,000 [34.57]	140,000 [41.02]
Net Sensible Capacity Btu [kW]	88,800 [26.02]	88,800 [26.02]	88,800 [26.02]	99,500 [29.15]
Net Latent Capacity Btu [kW]	29,200 [8.56]	29,200 [8.56]	29,200 [8.56]	40,500 [11.87]
IEER ³ (Standard/VFD)	11.9/14.6	11.9	11.9	10.8/13.5
Net System Power kW	10.49	10.49	10.49	12.73
Compressor				
No./Type	2/Scroll	2/Scroll	2/Scroll	2/Scroll
Outdoor Sound Rating (dB)⁵	88	88	88	88
Outdoor Coil—Fin Type	Louvered	Louvered	Louvered	Louvered
Tube Type	Rifled	Rifled	Rifled	MicroChannel
Tube Size in. [mm] OD/MicroChannel Depth in. [mm]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]	1 [25.4]
Face Area sq. ft. [sq. m]	27 [2.51]	27 [2.51]	27 [2.51]	27 [2.51]
Rows / FPI [FPcm]	2 / 22 [9]	2 / 22 [9]	2 / 22 [9]	2 / 23 [9]
Indoor Coil—Fin Type	Louvered	Louvered	Louvered	Louvered
Tube Type	Rifled	Rifled	Rifled	Rifled
Tube Size in. [mm]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]
Face Area sq. ft. [sq. m]	13.5 [1.25]	13.5 [1.25]	13.5 [1.25]	13.5 [1.25]
Rows / FPI [FPcm]	3 / 18 [7]	3 / 18 [7]	3 / 18 [7]	4 / 15 [6]
Refrigerant Control	TX Valves	TX Valves	TX Valves	TX Valves
Drain Connection No./Size in. [mm]	1/1 [25.4]	1/1 [25.4]	1/1 [25.4]	1/1 [25.4]
Outdoor Fan—Type	Propeller	Propeller	Propeller	Propeller
No. Used/Diameter in. [mm]	2/24 [609.6]	2/24 [609.6]	2/24 [609.6]	2/24 [609.6]
Drive Type/No. Speeds	Direct/1	Direct/1	Direct/1	Direct/1
CFM [L/s]	8000 [3775]	8000 [3775]	8000 [3775]	8000 [3775]
No. Motors/HP	2 at 1/3 HP	2 at 1/3 HP	2 at 1/3 HP	2 at 1/2 HP
Motor RPM	1075	1075	1075	1075
Indoor Fan—Type	FC Centrifugal	FC Centrifugal	FC Centrifugal	FC Centrifugal
No. Used/Diameter in. [mm]	1/15x15 [381x381]	1/15x15 [381x381]	1/15x15 [381x381]	1/15x15 [381x381]
Drive Type	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)
No. Speeds	Single / Multiple	Single	Single	Single / Multiple
No. Motors	1	1	1	1
Motor HP	3	2	3	3
Motor RPM	1725	1725	1725	1725
Motor Frame Size	56	56	56	56
Filter—Type	Disposable	Disposable	Disposable	Disposable
Furnished	Yes	Yes	Yes	Yes
(No.) Size Recommended in. [mm x mm x mm]	(6)2x18x18 [51x457x457]	(6)2x18x18 [51x457x457]	(6)2x18x18 [51x457x457]	(6)2x18x18 [51x457x457]
Refrigerant Charge Oz. [g]	172.8/180.8 [4899/5126]	172.8/180.8 [4899/5126]	172.8/180.8 [4899/5126]	147.2/152 [4173/4309]
Weights				
Net Weights lbs. [kg]	1120 [508]	1112 [504]	1120 [508]	1266 [574]
Ship Weights lbs. [kg]	1149 [521]	1149 [521]	1149 [521]	1303 [591]

GENERAL DATA - RLNL

NOM. SIZES 6-12½ TONS [21.1-43.9 kW]

Model RLNL-Series Model RLNL-Series (with VFD)	(B,C)151CM H151CS	(B,C)151DL H151DR	(B,C)151DM H151DS	(B,C)151YL
Cooling Performance¹				CONTINUED →
Gross Cooling Capacity Btu [kW]	146,000 [42.78]	146,000 [42.78]	146,000 [42.78]	146,000 [42.78]
EER/SEER ²	11/NA	11/NA	11/NA	11/NA
Nominal CFM/ARI Rated CFM [L/s]	5000/4225 [2360/1994]	5000/4225 [2360/1994]	5000/4225 [2360/1994]	5000/4225 [2360/1994]
ARI Net Cooling Capacity Btu [kW]	140,000 [41.02]	140,000 [41.02]	140,000 [41.02]	140,000 [41.02]
Net Sensible Capacity Btu [kW]	99,500 [29.15]	99,500 [29.15]	99,500 [29.15]	99,500 [29.15]
Net Latent Capacity Btu [kW]	40,500 [11.87]	40,500 [11.87]	40,500 [11.87]	40,500 [11.87]
IEER ³ (Standard/VFD)	10.8/13.5	10.8/13.5	10.8/13.5	10.8/13.5
Net System Power kW	12.73	12.73	12.73	12.73
Compressor				
No./Type	2/Scroll	2/Scroll	2/Scroll	2/Scroll
Outdoor Sound Rating (dB)⁵	88	88	88	88
Outdoor Coil—Fin Type	Louvered	Louvered	Louvered	Louvered
Tube Type	MicroChannel	MicroChannel	MicroChannel	MicroChannel
MicroChannel Depth in. [mm]	1 [25.4]	1 [25.4]	1 [25.4]	1 [25.4]
Face Area sq. ft. [sq. m]	27 [2.51]	27 [2.51]	27 [2.51]	27 [2.51]
Rows / FPI [FPcm]	2 / 23 [9]	2 / 23 [9]	2 / 23 [9]	2 / 23 [9]
Indoor Coil—Fin Type	Louvered	Louvered	Louvered	Louvered
Tube Type	Rifled	Rifled	Rifled	Rifled
Tube Size in. [mm]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]
Face Area sq. ft. [sq. m]	13.5 [1.25]	13.5 [1.25]	13.5 [1.25]	13.5 [1.25]
Rows / FPI [FPcm]	4 / 15 [6]	4 / 15 [6]	4 / 15 [6]	4 / 15 [6]
Refrigerant Control	TX Valves	TX Valves	TX Valves	TX Valves
Drain Connection No./Size in. [mm]	1/1 [25.4]	1/1 [25.4]	1/1 [25.4]	1/1 [25.4]
Outdoor Fan—Type	Propeller	Propeller	Propeller	Propeller
No. Used/Diameter in. [mm]	2/24 [609.6]	2/24 [609.6]	2/24 [609.6]	2/24 [609.6]
Drive Type/No. Speeds	Direct/1	Direct/1	Direct/1	Direct/1
CFM [L/s]	8000 [3775]	8000 [3775]	8000 [3775]	8000 [3775]
No. Motors/HP	2 at 1/2 HP	2 at 1/2 HP	2 at 1/2 HP	2 at 1/2 HP
Motor RPM	1075	1075	1075	1075
Indoor Fan—Type	FC Centrifugal	FC Centrifugal	FC Centrifugal	FC Centrifugal
No. Used/Diameter in. [mm]	1/15x15 [381x381]	1/15x15 [381x381]	1/15x15 [381x381]	1/15x15 [381x381]
Drive Type	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)
No. Speeds	Single / Multiple	Single / Multiple	Single / Multiple	Single / Multiple
No. Motors	1	1	1	1
Motor HP	5	3	5	3
Motor RPM	1725	1725	1725	1725
Motor Frame Size	184	56	184	56
Filter—Type	Disposable	Disposable	Disposable	Disposable
Furnished	Yes	Yes	Yes	Yes
(No.) Size Recommended in. [mm x mm x mm]	(6)2x18x18 [51x457x457]	(6)2x18x18 [51x457x457]	(6)2x18x18 [51x457x457]	(6)2x18x18 [51x457x457]
Refrigerant Charge Oz. [g]	147.2/152 [4173/4309]	147.2/152 [4173/4309]	147.2/152 [4173/4309]	147.2/152 [4173/4309]
Weights				
Net Weights lbs. [kg]	1238 [562]	1230 [558]	1238 [562]	1230 [558]
Ship Weights lbs. [kg]	1267 [575]	1267 [575]	1267 [575]	1267 [575]

GENERAL DATA - RLNL

NOM. SIZES 6-12¹/₂ TONS [21.1-43.9 kW]

Model RLNL-Series	(B,C)151YM
Model RLNL-Series (with VFD)	
Cooling Performance¹	
Gross Cooling Capacity Btu [kW]	146,000 [42.78]
EER/SEER ²	11/NA
Nominal CFM/ARI Rated CFM [L/s]	5000/4225 [2360/1994]
ARI Net Cooling Capacity Btu [kW]	140,000 [41.02]
Net Sensible Capacity Btu [kW]	99,500 [29.15]
Net Latent Capacity Btu [kW]	40,500 [11.87]
IEER ³ (Standard/VFD)	10.8
Net System Power kW	12.73
Compressor	
No./Type	2/Scroll
Outdoor Sound Rating (dB)⁵	
88	
Outdoor Coil—Fin Type	
Tube Type	Louvered
MicroChannel Depth in. [mm]	MicroChannel
Face Area sq. ft. [sq. m]	1 [25.4]
Rows / FPI [FPcm]	27 [2.51]
Indoor Coil—Fin Type	
Tube Type	Louvered
Tube Size in. [mm]	Rifled
Face Area sq. ft. [sq. m]	0.375 [9.5]
Rows / FPI [FPcm]	13.5 [1.25]
Refrigerant Control	4 / 15 [6]
Drain Connection No./Size in. [mm]	TX Valves
Outdoor Fan—Type	
No. Used/Diameter in. [mm]	Propeller
Drive Type/No. Speeds	2/24 [609.6]
CFM [L/s]	Direct/1
No. Motors/HP	8000 [3775]
Motor RPM	2 at 1/2 HP
Indoor Fan—Type	
No. Used/Diameter in. [mm]	FC Centrifugal
Drive Type	1/15x15 [381x381]
No. Speeds	Belt (Adjustable)
No. Motors	Single
Motor HP	1
Motor RPM	5
Motor Frame Size	1725
Filter—Type	
Furnished	Disposable
(No.) Size Recommended in. [mm x mm x mm]	Yes
Refrigerant Charge Oz. [g]	
147.2/152 [4173/4309]	
Weights	
Net Weights lbs. [kg]	1238 [562]
Ship Weights lbs. [kg]	1267 [575]

ELECTRICAL DATA - RLNL-B

ELECTRICAL DATA - RLNL SERIES										
		B073CL/ C073CL	B073CM/ C073CM	B073DL/ C073DL	B073DM/ C073DM	B073YL/ C073YL	B073YM/ C073YM	B090CL/ C090CL/ H090CR	B090CM/ C090CM/ H090CS	B090CN/ C090CN/ H090CT
Unit Information	Unit Operating Voltage Range	187-253	187-253	414-506	414-506	518-632	518-632	187-253	187-253	187-253
	Volts	208/230	208/230	460	460	575	575	208/230	208/230	208/230
	Minimum Circuit Ampacity	35/35	35/35	16	16	13	13	43/43	43/43	48/48
	Minimum Overcurrent Protection Device Size	40/40	40/40	20	20	15	15	45/45	45/45	50/50
	Maximum Overcurrent Protection Device Size	50/50	50/50	20	20	15	15	50/50	50/50	60/60
Compressor Motor	No.	1	1	1	1	1	1	2	2	2
	Volts	200/240	200/240	480	480	600	600	200/240	200/240	200/240
	Phase	3	3	3	3	3	3	3	3	3
	RPM	3450	3450	3450	3450	3450	3450	3450	3450	3450
	HP, Compressor 1	6	6	6	6	6	6	3 1/4	3 1/4	3 1/4
	Amps (RLA), Comp. 1	19.6/19.6	19.6/19.6	8.2	8.2	6.6	6.6	13.1/13.1	13.1/13.1	13.1/13.1
	Amps (LRA), Comp. 1	136/136	136/136	66.1	66.1	55.3	55.5	83.1/83.1	83.1/83.1	83.1/83.1
	HP, Compressor 2	—	—	—	—	—	—	3 1/4	3 1/4	3 1/4
	Amps (RLA), Comp. 2	—	—	—	—	—	—	13.1/13.1	13.1/13.1	13.1/13.1
	Amps (LRA), Comp. 2	—	—	—	—	—	—	83.1/83.1	83.1/83.1	83.1/83.1
Condenser Motor	No.	2	2	2	2	2	2	2	2	2
	Volts	208/230	208/230	460	460	575	575	208/230	208/230	208/230
	Phase	1	1	1	1	1	1	1	1	1
	HP	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3
	Amps (FLA, each)	2.4/2.4	2.4/2.4	1.4	1.4	1	1	2.4/2.4	2.4/2.4	2.4/2.4
	Amps (LRA, each)	4.7/4.7	4.7/4.7	2.4	2.4	1.5	1.5	4.7/4.7	4.7/4.7	4.7/4.7
Evaporator Fan	No.	1	1	1	1	1	1	1	1	1
	Volts	208/230	208/230	460	460	575	575	208/230	208/230	208/230
	Phase	3	3	3	3	3	3	3	3	3
	HP	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	2	2	3
	Amps (FLA, each)	5.6/5.6	5.6/5.6	2.8	2.8	1.9	1.9	8/8	8/8	13/13
	Amps (LRA, each)	28.8/28.8	28.8/28.8	14.4	14.4	14	14	56/56	56/56	74.5/74.5

ELECTRICAL DATA - RLNL-B

ELECTRICAL DATA - RLNL SERIES										
		B090DL/ C090DL/ H090DR	B090DM/ C090DM/ H090DS	B090DN/ C090DN/ H090DT	B090YL/ C090YL	B090YM/ C090YM	B090YN/ C090YN	B102CL/ C102CL/ H102CR	B102CM/ C102CM/ H102CS	B102DL/ C102DL/ H102DR
Unit Information	Unit Operating Voltage Range	414-506	414-506	414-506	518-632	518-632	518-632	187-253	187-253	414/506
	Volts	460	460	460	575	575	575	208/230	208/230	460
	Minimum Circuit Ampacity	21	21	24	16	16	21	49/49	54/54	23
	Minimum Overcurrent Protection Device Size	25	25	25	20	20	25	50/50	55/55	25
	Maximum Overcurrent Protection Device Size	25	25	30	20	20	25	60/60	60/60	25
Compressor Motor	No.	2	2	2	2	2	2	2	2	2
	Volts	480	480	480	600	600	600	200/230	200/230	460
	Phase	3	3	3	3	3	3	3	3	3
	RPM	3450	3450	3450	3450	3450	3450	3450	3450	3450
	HP, Compressor 1	3 1/4	3 1/4	3 1/4	3 1/4	3 1/4	3 1/4	3 3/4	3 3/4	3 3/4
	Amps (RLA), Comp. 1	6.1	6.1	6.1	4.4	4.4	4.4	16/16	16/16	7.1
	Amps (LRA), Comp. 1	41	41	41	33	33	33	91/91	91/91	46
	HP, Compressor 2	3 1/4	3 1/4	3 1/4	3 1/4	3 1/4	3 1/4	3 3/4	3 3/4	3 3/4
	Amps (RLA), Comp. 2	6.1	6.1	6.1	4.4	4.4	4.4	16/16	16/16	7.1
	Amps (LRA), Comp. 2	41	41	41	33	33	33	91/91	91/91	46
Condenser Motor	No.	2	2	2	2	2	2	2	2	2
	Volts	460	460	460	575	575	575	208/230	208/230	460
	Phase	1	1	1	1	1	1	1	1	1
	HP	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3
	Amps (FLA, each)	1.4	1.4	1.4	1	1	1	2.4/2.4	2.4/2.4	1.4
	Amps (LRA, each)	2.4	2.4	2.4	1.5	1.5	1.5	4.7/4.7	4.7/4.7	2.4
Evaporator Fan	No.	1	1	1	1	1	1	1	1	1
	Volts	460	460	460	575	575	575	208/230	208/230	460
	Phase	3	3	3	3	3	3	3	3	3
	HP	2	2	3	2	2	3	2	3	2
	Amps (FLA, each)	4	4	7	4	4	8	8/8	13/13	4
	Amps (LRA, each)	28	28	38.1	19	19	20	56/56	74.5/74.5	28

ELECTRICAL DATA - RLNL-B

ELECTRICAL DATA - RLNL SERIES										
		B102DM/ C102DM/ H102DS	B102YL/ C102YL	B102YM/ C102YM	B120CL/ C120CL/ H120CR	B120CM/ C120CM/ H120CS	B120DL/ C120DL/ H120DR	B120DM/ C120DM/ H120DS	B120YL/ C120YL	B120YM/ C120YM
Unit Information	Unit Operating Voltage Range	414-506	518-632	518-632	187-253	187-253	414-506	414-506	518-632	518-632
	Volts	460	575	575	208/230	208/230	460	460	575	575
	Minimum Circuit Ampacity	26	19	24	49/49	54/54	25	28	19	24
	Minimum Overcurrent Protection Device Size	30	20	25	50/50	55/55	25	30	20	25
	Maximum Overcurrent Protection Device Size	30	20	30	60/60	60/60	30	35	20	30
Compressor Motor	No.	2	2	2	2	2	2	2	2	2
	Volts	460	575	575	200/240	200/240	480	480	575	575
	Phase	3	3	3	3	3	3	3	3	3
	RPM	3450	3450	3450	3450	3450	3450	3450	3450	3450
	HP, Compressor 1	3 3/4	3 3/4	3 3/4	4 1/4	4 1/4	4 1/4	4 1/4	4 1/4	4 1/4
	Amps (RLA), Comp. 1	7.1	5.6	5.6	16/16	16/16	7.8	7.8	5.7	5.7
	Amps (LRA), Comp. 1	46	37	37	110/110	110/110	52	52	38.9	38.9
	HP, Compressor 2	3 3/4	3 3/4	3 3/4	4 1/4	4 1/4	4 1/4	4 1/4	4 1/4	4 1/4
	Amps (RLA), Comp. 2	7.1	5.6	5.6	16/16	16/16	7.8	7.8	5.7	5.7
	Amps (LRA), Comp. 2	46	37	37	110/110	110/110	52	52	38.9	38.9
Condenser Motor	No.	2	2	2	2	2	2	2	2	2
	Volts	460	575	575	208/230	208/230	460	460	575	575
	Phase	1	1	1	1	1	1	1	1	1
	HP	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3
	Amps (FLA, each)	1.4	1	1	2.4/2.4	2.4/2.4	1.4	1.4	1	1
	Amps (LRA, each)	2.4	1.5	1.5	4.7/4.7	4.7/4.7	2.4	2.4	1.5	1.5
Evaporator Fan	No.	1	1	1	1	1	1	1	1	1
	Volts	460	575	575	208/230	208/230	460	460	575	575
	Phase	3	3	3	3	3	3	3	3	3
	HP	3	2	3	2	3	2	3	2	3
	Amps (FLA, each)	7	4	8	8/8	13/13	4	7	4	8
	Amps (LRA, each)	38.1	19	20	56/56	74.5/74.5	28	38.1	19	20

ELECTRICAL DATA - RLNL-B

ELECTRICAL DATA - RLNL SERIES							
		B151CL/ C151CL/ H151CR	B151CM/ C151CM/ H151CS	B151DL/ C151DL/ H151DR	B151DM/ C151DM/ H151DS	B151YL/ C151YL	B151YM/ C151YM
Unit Information	Unit Operating Voltage Range	187-253	187-253	414-506	414-506	518-632	518-632
	Volts	208/230	208/230	460	460	575	575
	Minimum Circuit Ampacity	67/67	71/71	33	36	28	28
	Minimum Overcurrent Protection Device Size	70/70	75/75	35	40	30	30
	Maximum Overcurrent Protection Device Size	80/80	90/90	40	45	35	35
Compressor Motor	No.	2	2	2	2	2	2
	Volts	208/230	208/230	460	460	575	575
	Phase	3	3	3	3	3	3
	RPM	3450	3450	3450	3450	3450	3450
	HP, Compressor 1	5 3/4	5 3/4	5 3/4	5 3/4	5 3/4	5 3/4
	Amps (RLA), Comp. 1	22.4/22.4	22.4/22.4	10.6	10.6	7.7	7.7
	Amps (LRA), Comp. 1	149/149	149/149	75	75	54	54
	HP, Compressor 2	5 1/4	5 1/4	5 1/4	5 1/4	5 1/4	5 1/4
	Amps (RLA), Comp. 2	19/19	19/19	9.7	9.7	7.4	7.4
	Amps (LRA), Comp. 2	123/123	123/123	62	62	50	50
Condenser Motor	No.	2	2	2	2	2	2
	Volts	208/230	208/230	460	460	575	575
	Phase	1	1	1	1	1	1
	HP	1/2	1/2	1/2	1/2	1/2	1/2
	Amps (FLA, each)	2.3/2.3	2.3/2.3	1.5	1.5	1	1
	Amps (LRA, each)	5.6/5.6	5.6/5.6	3.1	3.1	2.2	2.2
Evaporator Fan	No.	1	1	1	1	1	1
	Volts	208/230	208/230	460	460	575	575
	Phase	3	3	3	3	3	3
	HP	3	5	3	5	3	5
	Amps (FLA, each)	15/15	18.8/18.8	7	10	8	8
	Amps (LRA, each)	74.5/74.5	82.6/82.6	38.1	41.3	20	33

VI. INSTALLATION

A. GENERAL

1. PRE-INSTALLATION CHECK-POINTS

Before attempting any installation, the following points should be carefully considered:

- Structural strength of supporting members. (rooftop installation)
- Clearances and provision for servicing.
- Power supply and wiring.
- Air duct connections.
- Drain facilities and connections.
- Location for minimum noise.

2. LOCATION

These units are designed for outdoor installations. They can be mounted on a slab or rooftop. They are not to be installed within any part of a structure such as an attic, crawl space, closet, or any other place where condenser air flow is restricted or other than outdoor ambient conditions prevail. Since the application of the units is of the outdoor type, it is important to consult your local code authorities at the time the first installation is made.

B. OUTSIDE SLAB INSTALLATION (Typical outdoor slab installations are shown in Figures 6 and 7.)

- Select a location where external water drainage cannot collect around the unit.
- Provide a level concrete slab extending 3" [76.2 mm] beyond all four sides of the unit. The slab should be sufficient above grade to prevent ground water from entering the unit. **IMPORTANT:** To prevent transmission of noise or vibration, slab should not be connected to building structure.
- The location of the unit should be such as to provide proper access for inspection and servicing.
- Locate unit where operating sounds will not disturb owner or neighbors.
- Locate unit so roof runoff water does not pour directly on the unit. Provide gutter or other shielding at roof level. Do not locate unit in an area where excessive snow drifting may occur or accumulate.

C. CLEARANCES

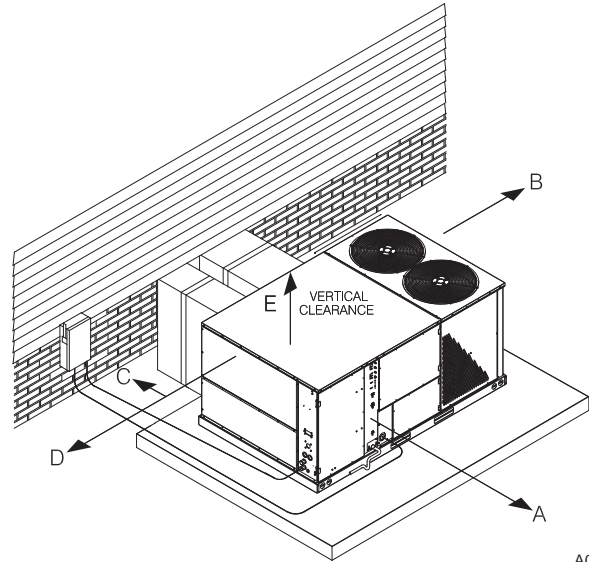
The following minimum clearances must be observed for proper unit performance and serviceability.

- Provide 48" [1219.2 mm] minimum clearance at the front of the unit. Provide 18" [457.2 mm] minimum clearance at all other sides of the unit.
- Provide 60" [1524 mm] minimum clearance between top of unit and maximum 3 foot [.91 m] overhang.
- Unit is design certified for application on combustible flooring with 0" [0 mm] minimum clearance.
- See Figure 6 for illustration of minimum installation-service clearances.

FIGURE 6
OUTSIDE SLAB INSTALLATION, BASEMENT OR CRAWL SPACE DISTRIBUTION SYSTEM

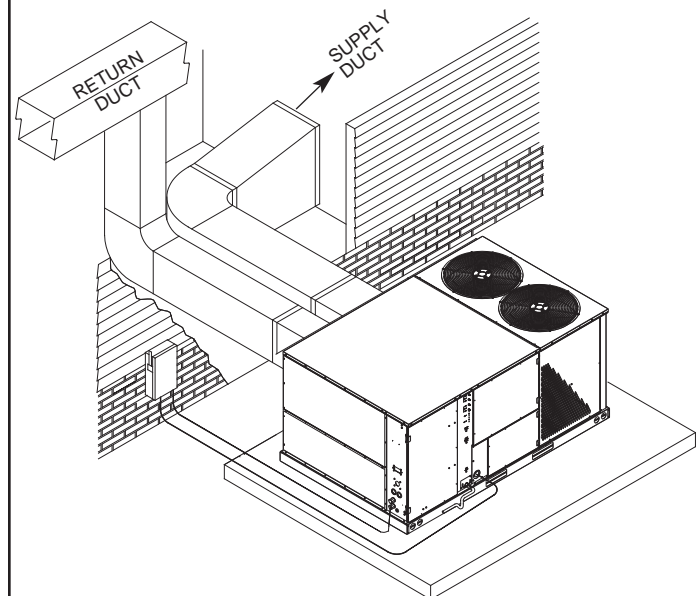
Recommended Clearance	Location
48" [1219.2 mm]	A - Front
18" [457.2 mm]	B - Condenser Coil
18" [457.2 mm]	C - Duct Side
18"* [457.2 mm]	D - Evaporator End
60" [1524 mm]	E - Above

*Without Economizer. 48" [1219.2 mm] With Economizer



A0741-03

FIGURE 7
OUTSIDE SLAB INSTALLATION, CLOSET DISTRIBUTION SYSTEM. SLAB FLOOR CONSTRUCTION



A0739-03

D. ROOFTOP INSTALLATION

1. Before locating the unit on the roof, make sure that the strength of the roof and beams is adequate at that point to support the weight involved. **This is very important and user's responsibility.**
2. For rigging and roofcurb details, see Figures 8 and 9. Use field-furnished spreaders.
3. For roofcurb assembly, see Roofcurb Installation Instructions.
4. If the roofcurb is not used, provisions for disposing of condensate water runoff must be provided.
5. The unit should be placed on a solid and level roofcurb or platform of adequate strength. See Figure 10.
6. The location of the unit on the roof should be such as to provide proper access for inspection and servicing.

IMPORTANT: If unit will not be put into service immediately, cover supply and return openings to prevent excessive condensation.

**FIGURE 8
RIGGING FOR LIFTING**

CORNER WEIGHTS BY PERCENTAGE			
A	B	C	D
33%	27%	17%	23%

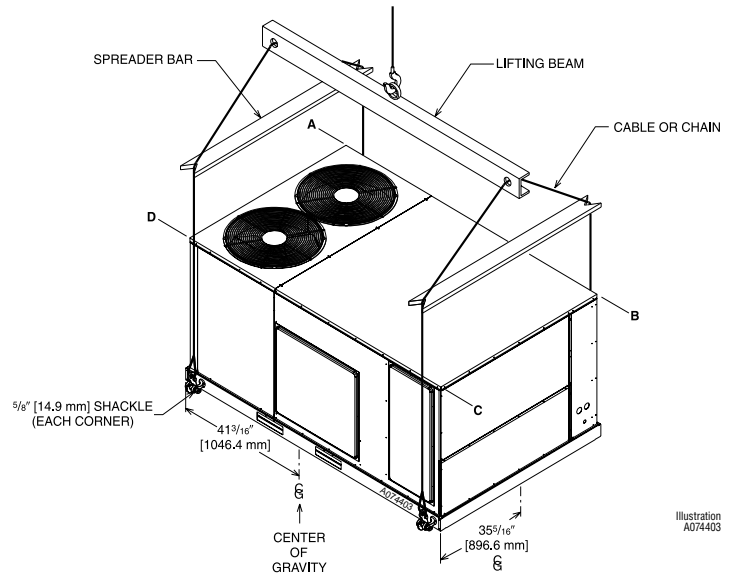
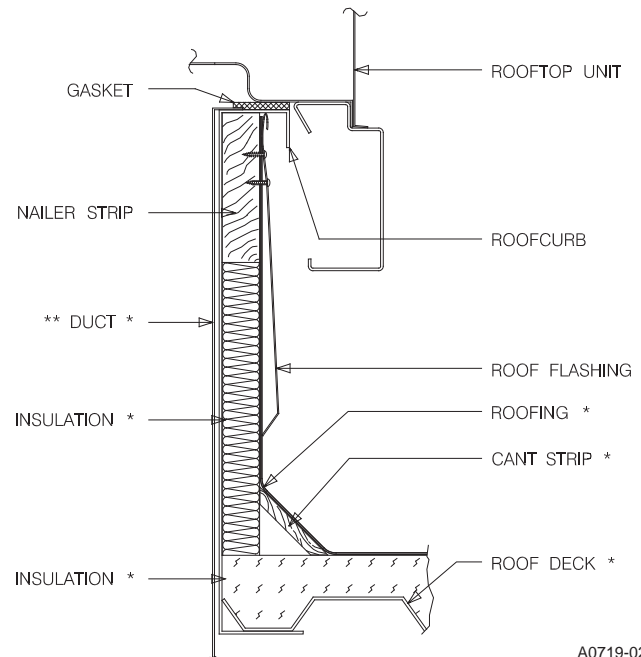
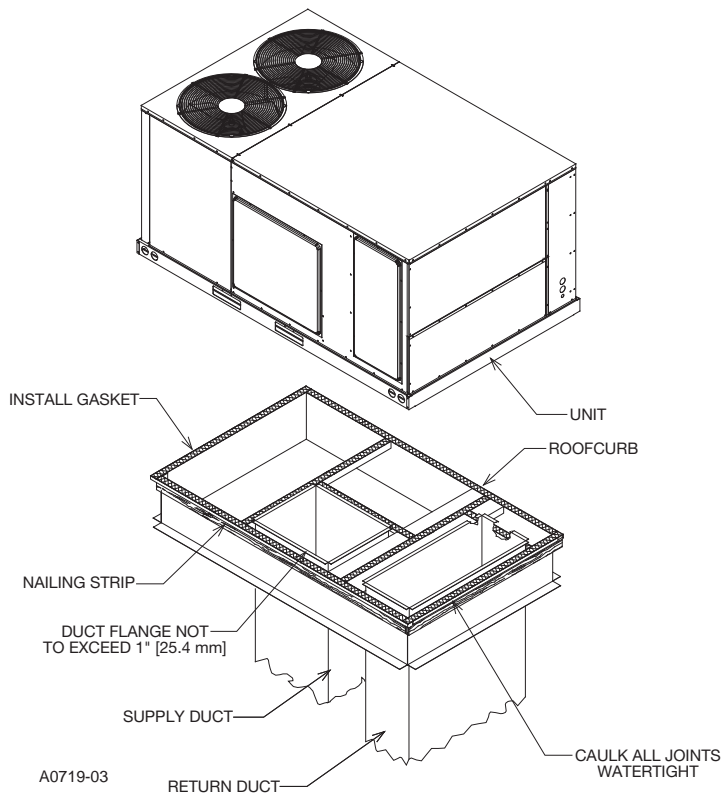


Illustration
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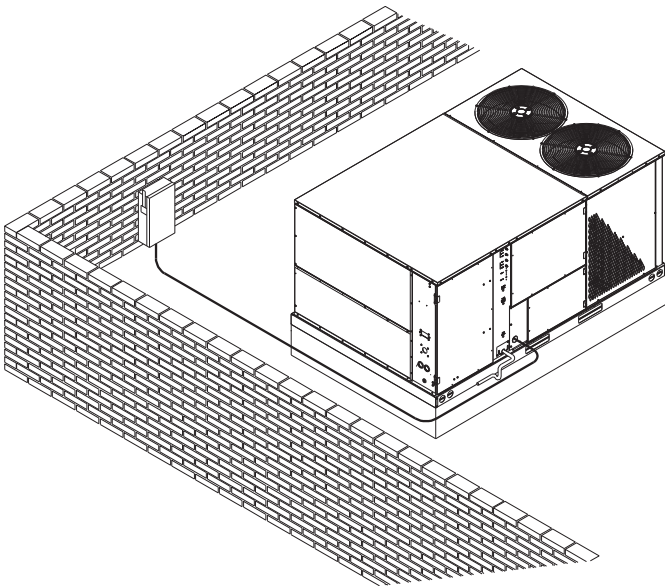
**FIGURE 9
ROOFCURB INSTALLATION**



* BY CONTRACTOR

** FOR INSTALLATION OF DUCT AS SHOWN, USE RECOMMENDED DUCT SIZES FROM ROOFCURB INSTALLATION INSTRUCTIONS. FOR DUCT FLANGE ATTACHMENT TO UNIT, SEE UNIT INSTALLATION INSTRUCTIONS FOR RECOMMENDED DUCT SIZES.

FIGURE 10
FLAT ROOFTOP INSTALLATION, ATTIC OR DROP CEILING
DISTRIBUTION SYSTEM. MOUNTED ON ROOFCURB.
CURB MUST BE LEVEL



A1112-03

VII. DUCTWORK

Ductwork should be fabricated by the installing contractor in accordance with local codes and NFPA90A. Industry manuals may be used as a guide when sizing and designing the duct system - contact Air Conditioning Contractors of America, 1513 16th St. N.W., Washington, D.C. 20036.

▲ WARNING

DO NOT, UNDER ANY CIRCUMSTANCES, CONNECT RETURN DUCTWORK TO ANY OTHER HEAT PRODUCING DEVICE SUCH AS A FIREPLACE INSERT, STOVE, ETC. UNAUTHORIZED USE OF SUCH DEVICES MAY RESULT IN FIRE, CARBON MONOXIDE POISONING, EXPLOSION, PROPERTY DAMAGE, SEVERE PERSONAL INJURY OR DEATH.

The unit should be placed as close to the space to be air conditioned as possible allowing clearance dimensions as indicated. Ducts should be run as directly as possible to supply and return outlets. Use of non-flammable waterproof flexible connectors on both supply and return connections at the unit to reduce noise transmission is recommended.

It is preferable to install the unit on the roof of the structure if the registers or diffusers are located on the wall or in the ceiling. A slab installation could be considered when the registers are low on a wall or in the floor.

On ductwork exposed to outside air conditions of temperature and humidity, use a minimum of 2" [50.8 mm] of insulation and a vapor barrier. Distribution system in attic, furred space or crawl space should be insulated with at least 2" [50.8 mm] of insulation with vapor barrier. One-half to 1" [25.4 mm] thickness of insulation is usually sufficient for ductwork inside the air conditioned space.

Balancing dampers should be provided for each branch duct in the supply system. Ductwork should be properly supported from the structure.

When installing ductwork, consider the following items:

1. Noncombustible flexible connectors should be used between ductwork and unit to reduce noise and vibration transmission into the ductwork.
2. When auxiliary heaters are installed, use noncombustible flexible connectors and clearance to combustible material of 0" [0 mm] for the first 3 feet [.91 m] of discharge duct. Clearance to unit top and side is 0" [0 mm].

VIII. FILTERS

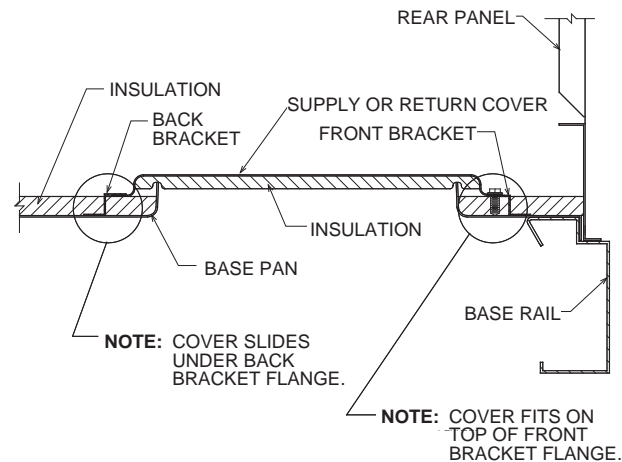
This unit is provided with 6 - 2" x 18" x 18" [51mm x 457 mm x 457 mm] disposable filters. When replacing filters, ensure they are inserted fully to the back to prevent bypass.

VIX. CONVERSION PROCEDURE

DOWNFLOW TO HORIZONTAL

1. Remove the screws and covers from the outside of the supply and return sections.
2. Install the covers over the bottom supply and return openings, painted side up inserting the leading flange under the bracket provided. Place the back flange to the top of the front bracket provided. See Figure 11.
3. Secure the return and supply cover to the front bracket with one (1) screw.

FIGURE 11
COVER GASKET DETAIL



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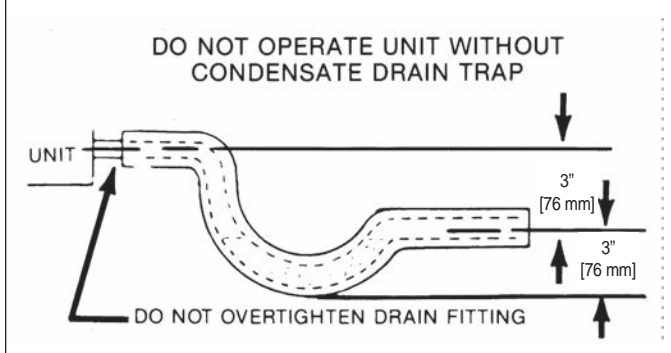
X. CONDENSATE DRAIN

IMPORTANT: Install a condensate trap to ensure proper condensate drainage. See Figure 12.

The condensate drain pan has a threaded female 1 inch NPT (11.5 TPI) connection. Consult local codes or ordinances for specific requirements of condensate drain piping and disposal.

- To use the removable drain pan feature of this unit, some of the condensate line joints should be assembled for easy removal and cleaning.
- Use a thin layer of Teflon tape or paste on drain pan connections and install only hand tight.
- Do not over tighten drain pan connections as damage to the drain pan may occur.
- Drain line **MUST NOT** block service access panels.
- Drain line must be no smaller than drain pan outlet and adequately sized to accommodate the condensate discharge from the unit.
- Drain line should slope away from unit a minimum of 1/8" per foot to ensure proper drainage.
- Drain line must be routed to an acceptable drain or outdoors in accordance with local codes.
- Do not connect condensate drain line to a closed sewer pipe.
- Drain line may need insulation or freeze protection in certain applications.

FIGURE 12
CONDENSATE DRAIN



XI. ELECTRICAL WIRING

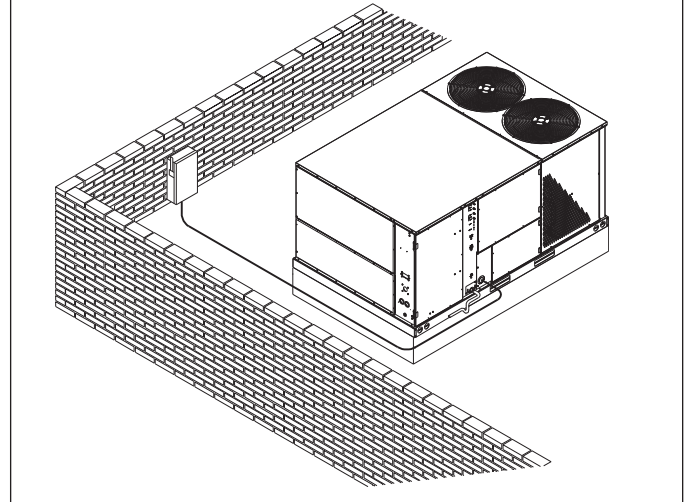
Field wiring must comply with the National Electrical Code (CEC in Canada) and local ordinances that may apply.

A. POWER WIRING

1. This unit incorporates single-point electrical connections for the unit and electric heat accessory.
2. It is important that proper electrical power is available to the unit. Voltage should not vary more than 10% from the values marked on the unit rating plate. Phase voltages must be balanced within 3%.
3. Install a branch circuit disconnect within sight of the unit. Use the unit rating plate or RLNL-B Electrical Data to determine the required size.
4. The branch circuit wire must be sized in accordance with the National Electrical Code (C.E.C. in Canada) and local ordinances that may apply using the minimum circuit ampacity found on the unit rating plate.
5. Field-installed power wiring must be run through grounded rain-tight conduit attached to the unit power entry panel and connected as follows:

UNITS WITHOUT ELECTRIC HEAT - Connect power wiring to the power terminal block located on the left side of the electric heat compartment. Connect the ground wire to the adjacent ground lug.

FIGURE 13
BRANCH CIRCUIT DISCONNECT LOCATION



UNITS WITH FACTORY INSTALLED ELECTRIC HEAT -

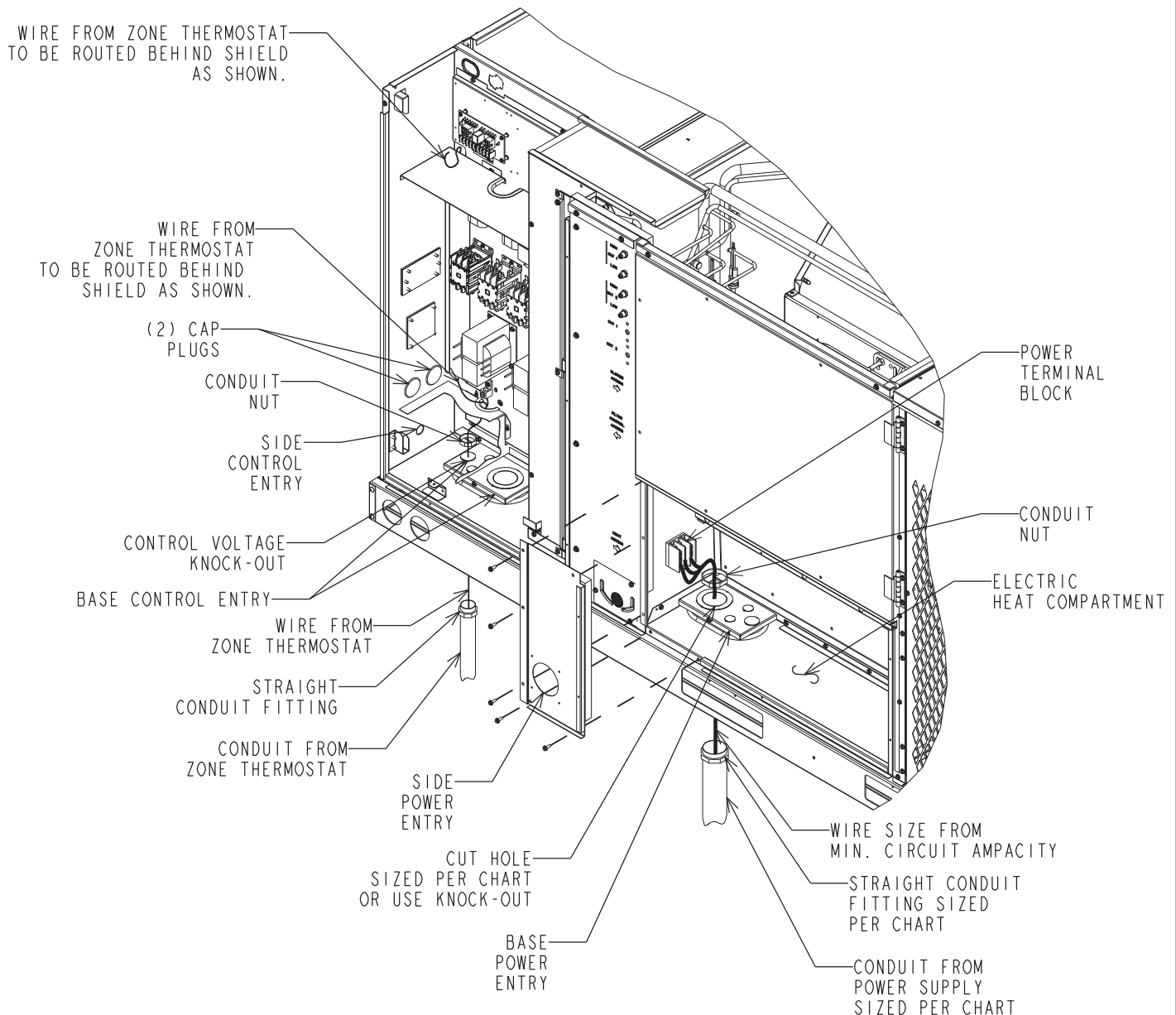
Connect power wiring to the power terminal block located on the electric heater kit. Connect the ground wire to the adjacent ground lug. **DO NOT** connect aluminum wiring directly to the electric heater terminal block. Wiring to the unit contactors is factory-connected.

6. For field installation of an electric heater kit, follow the instructions below. Refer to the information supplied with the kit.
 - a. Removing screws as required, open heater access door and detach adjacent power entry panel.
 - b. Remove wires to unit contactor (1L1, 1L2, 1L3) from unit terminal block on the left side of the electric heat compartment. Remove and discard the terminal block and the adjacent ground lug.
 - c. Remove the heater kit block-off panel and install the heater kit in its place using 9 of the 12 screws previously removed.
 - d. Connect the unit contactor wires (1L1, 1L2, 1L3) to the compressor fuse block on the heater kit.
 - e. Re-install the power entry panel & run conduit and the proper size field wiring through the opening in the panel.
 - f. Connect field wiring to the power terminal block located on the electric heater kit. Connect ground wire to the adjacent ground lug.
 - g. Connect heater kit control plug to the receptacle on the control wiring harness.
 - h. Close heater access door and secure with screws previously removed.

B. CONTROL WIRING (Class II)

1. Low voltage wiring should not be run in conduit with power wiring.
2. Control wiring is routed through the 7/8" [22 mm] hole in the unit side panel. See Figure 14. Use a minimum #18 AWG thermostat wire. For wire lengths exceeding 50' [15.24 m] use #16 AWG thermostat wire. Connect the control wiring to the low voltage terminal block located on the unit integrated control. Route wires under the control voltage shield. See Figure 14.
3. It is necessary that only approved thermostats be used. Please contact your distributor for part number information. See thermostat specification catalog for recommended thermostat.

FIGURE 14



4. Figure 15 shows representative low voltage connection diagrams. Read your thermostat installation instructions for any special requirements for your specific thermostat.

C. INTERNAL WIRING

1. A diagram of the internal wiring of this unit is located on the inside of the control access panel and in this manual. If any of the original wiring must be replaced, the wire gauge and insulation must be the same as original wiring. Transformer is factory-wired for 230 volts on 208/230 volt models and must be changed for 208-volt applications. See unit wiring diagram for 208-volt wiring.

D. GROUNDING

⚠ WARNING

THE UNIT MUST BE PERMANENTLY GROUNDED. A GROUNDING LUG IS PROVIDED IN THE ELECTRIC HEAT ACCESS AREA FOR A GROUND WIRE. FAILURE TO GROUND THIS UNIT CAN RESULT IN FIRE OR

ELECTRICAL SHOCK CAUSING PROPERTY DAMAGE, SEVERE PERSONAL INJURY OR DEATH.

E. THERMOSTAT

The thermostat should be mounted on an inside wall about five feet above the floor in a location where it will not be affected by unconditioned air, sun, or drafts from open doors or other sources. READ installation instructions in air conditioner thermostat package CAREFULLY because each has some different wiring requirements.

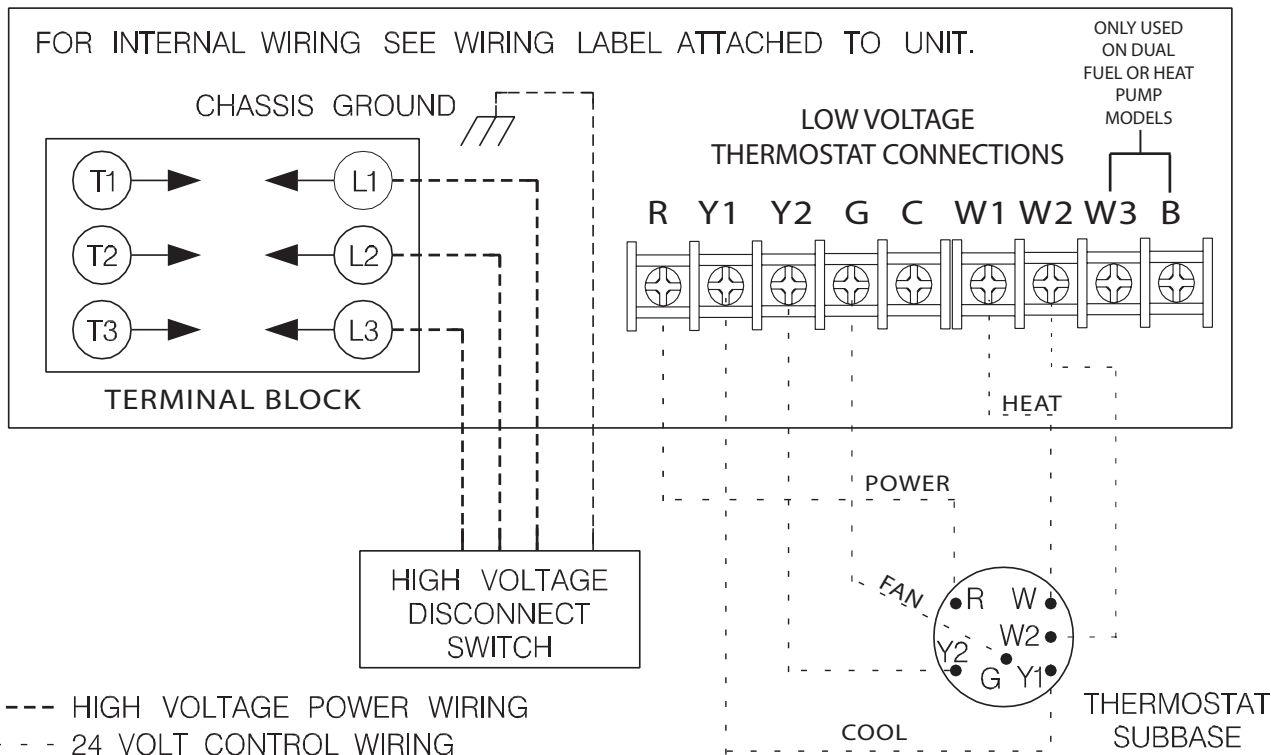
XII. INDOOR AIR FLOW DATA

Belt-drive blower models have motor sheaves set for proper CFM at a typical external static. See Tables C through G for blower performance.

XIII. CRANKCASE HEAT (OPTIONAL)

Crankcase heaters are standard on 6 ton and single stage 7½. Crankcase heat is not required on other models, but may be desirable under certain conditions.

**FIGURE 15
THERMOSTAT
CONNECTIONS
DIAGRAM**



ST-A1125-12-00

XIV. PRE-START CHECK

1. Is unit properly located and slightly slanted toward indoor condensate drain?
2. Is ductwork insulated, weatherproofed, with proper spacing to combustible materials?
3. Is air free to travel to and from outdoor coil? (See Figure 4.)
4. Is the wiring correct, tight, and according to unit wiring diagram?
5. Is unit grounded?
6. Are field supplied air filters in place and clean?
7. Do the outdoor fan and indoor blower turn freely without rubbing, and are they tight on the motor shafts?

XV. STARTUP

1. Turn thermostat to "OFF," turn "on" power supply at disconnect switch.
2. Turn temperature setting as high as it will go.
3. Turn fan switch to "ON."
4. Indoor blower should run. Be sure it is running in the right direction.
5. Turn fan switch to "AUTO." Turn system switch to "COOL" and turn temperature setting below room temperature. Unit should run in cooling mode.
6. Is outdoor fan operating correctly in the right direction?
7. Is compressor running correctly.

Record the following after the unit has run some time.

- A. Operating Mode _____
- B. Discharge Pressures (High) _____ PSIG [kPa]
- C. Vapor Pressure at Compressors (Low) _____ PSIG [kPa]

- D. Vapor Line Temperature at Compressors _____ °F [C°].
- E. Indoor Dry Bulb _____ °F [C°].
- F. Indoor Wet Bulb _____ °F [C°].
- G. Outdoor Dry Bulb _____ °F [C°].
- H. Outdoor Wet Bulb _____ °F [C°].
- I. Voltage at Contactor _____ Volts
- J. Current at Contactors _____ Amps
- K. Model Number _____
- L. Serial Number _____
- M. Location _____
- N. Owner _____
- O. Date _____

8. Turn thermostat system switch to "HEAT." Unit compressors should stop. Raise temperature setting to above room temperature. Unit should run in heating mode and auxiliary heaters, if installed, should come on.
9. Check the refrigerant charge using the instructions located on unit charging chart. Replace service port caps. Service port cores are for system access only and will leak if not tightly capped.
10. Adjust discharge air grilles and balance system.
11. Check ducts for condensation and air leaks.
12. Check unit for tubing and sheet metal rattles.
13. Instruct the owner on operation and maintenance.
14. Leave "INSTALLATION" and "USE AND CARE" instructions with owner

XVI. OPERATION

COOLING MODE

With thermostat in the cool mode, fan auto and the room temperature higher than the thermostat setting:

- A. Indoor blower contactor is energized through thermostat contact (G).
- B. Compressor contactors are energized through thermostat contacts (Y1) & (Y2) and high pressure controls.
- C. Economizer enthalpy control (if installed) controls operation of first-stage cooling and positions fresh air damper to maintain mixed air temperature. Second-stage cooling operates normally as required by second stage of thermostats.
- D. The system will continue in cooling operation as long as all safety controls are closed, until the thermostat is satisfied.

HEATING MODE

With the thermostat in heat mode, fan on auto, and the room temperature lower than the thermostat setting, the Indoor blower contactor is energized through thermostat contact (G).

XVII. BLOWER VFD (VFD equipped models only)

No adjustments of the VFD are required for installation or operation of this unit.

VFD MODEL

Schneider Altivar 212 (factory programmed).

REPLACEMENT

The VFD is horsepower and voltage specific therefore; replacement must be the same model as the existing. A pre-programmed VFD is recommended and available from ProStock. A non-programmed Schneider Altivar 212 may be used but must be programmed exactly per the included VFD I & O Manual (92-104334-01) programming guide for safe and proper function.

Operation

The purpose of the VFD is to allow low airflow in Fan Only (G) and First Stage Cooling (Y1) operation of a two stage unit. Unit air balancing should be performed at High Airflow (100% at RTU-C, 60Hz at VFD) by adjusting the blower motor sheave. High Airflow always occurs during a W1, W2, or Y2 call. For air balancing, without heating or cooling, the fan only speed can be temporarily increased to 100% by adjustment through the RTU-C keypad. To meet ASHRAE 90.1-2010 and for best performance, First Stage Cool and Fan Only speeds are factory set at 50% airflow (30 Hz at VFD). Both of these speeds are independently adjustable at the RTU-C. The VFD display will indicate an equivalent value in Hz (i.e. Low Cool adjusted to 60% at RTU-C will display as 36Hz at the VFD). A 20 second (adjustable at the VFD) ramp-up or ramp-down is used whenever the blower speed is increased or decreased. Low speed blower operation first ramps to 75%, to close fan proving switch, before ramping to the desired speed. Since the VFD operates on 24VDC control voltage, a blower relay (with 24VAC across the coil) is used to turn the VFD on. Blower speeds are changed via Modbus communication from the RTU-C.

For more information see VFD I & O Manual (92-104334-01).

▲ WARNING

ONLY ELECTRIC HEATER KITS SUPPLIED BY THIS MANUFACTURER AS DESCRIBED IN THIS PUBLICATION HAVE BEEN DESIGNED, TESTED, AND EVALUATED FOR USE WITH THIS UNIT. USE OF ANY OTHER MANUFACTURED ELECTRIC HEATERS INSTALLED WITHIN THIS UNIT MAY CAUSE HAZARDOUS CONDITIONS RESULTING IN PROPERTY DAMAGE, FIRE, BODILY INJURY OR DEATH.

In the heating mode, the thermostat will energize one or more supplementary heaters.

XVIII. MISCELLANEOUS

REPLACEMENT PARTS

Contact your local distributor for a complete parts list.

AIR-FLOW PERFORMANCE – 7.5 TON RLNL-B090/C090/H090 MODELS

Capacity	7.5 Ton [26.4 kW]																			
	External Static Pressure—Inches of Water [kPa]																			
	0.1 [0.02]	0.2 [0.05]	0.3 [0.07]	0.4 [0.10]	0.5 [0.12]	0.6 [0.15]	0.7 [0.17]	0.8 [0.20]	0.9 [0.22]	1.0 [0.25]	1.1 [0.27]	1.2 [0.30]	1.3 [0.32]	1.4 [0.35]	1.5 [0.37]	1.6 [0.40]	1.7 [0.42]	1.8 [0.45]	1.9 [0.47]	2.0 [0.50]
2400 [1133]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2500 [1180]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2600 [1227]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2700 [1274]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2800 [1321]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2900 [1369]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3000 [1416]	546	741	854	869	617	931	650	1024	685	1144	734	1189	763	1251	792	1313	822	1375	851	1437
3100 [1463]	560	804	598	940	632	1010	664	1107	713	1187	743	1249	772	1311	801	1373	830	1435	860	1497
3200 [1510]	576	876	612	1011	646	1089	678	1189	722	1247	751	1309	781	1371	810	1433	839	1495	868	1557
3300 [1557]	592	954	628	1096	660	1168	692	1274	731	1307	760	1369	789	1431	818	1493	848	1555	877	1617
3400 [1605]	607	1030	643	1180	673	1247	710	1306	739	1368	769	1430	798	1491	827	1553	856	1615	886	1677
3500 [1652]	622	1112	658	1271	689	1344	719	1366	748	1428	777	1490	807	1552	836	1613	865	1675	894	1737
3600 [1699]	638	1202	672	1361	704	1440	728	1426	757	1488	786	1550	815	1612	844	1674	874	1735	903	1797

NOTE: L-Drive left of 1st bold line, M-Drive in middle of bold lines, N-Drive right of 2nd bold line.

Drive Package	L, R	M, S	N, T
Motor H.P. [W]	2.0 [1491.4]	2.0 [1491.4]	3.0 [2237.1]
Blower Sheave	BK110	BK90	BK65
Motor Sheave	1VP-44	1VP-44	1VP-44
Turns Open	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6
RPM	682 650 620 587 555 523	774 742 710 674 642 610	1056 1005 954 904

- NOTES: 1. Factory sheave settings are shown in bold print.
 2. Re-adjustment of sheave required to achieve rated airflow at ARI minimum E.S.P.
 3. Do not operate above blower RPM shown as motor overloading will occur.
 4. Do not set motor sheave below one turn open.

AIRFLOW CORRECTION FACTORS-B090/C090/H090 7.5 TON [26.4 kW]

ACTUAL—CFM [L/s]	2600 [1227]	2800 [1321]	3000 [1416]	3200 [1510]	3400 [1605]	3600 [1699]	3800 [1793]
TOTAL MBH	0.97	0.98	0.99	1.00	1.01	1.02	1.03
SENSIBLE MBH	0.91	0.94	0.97	1.00	1.02	1.05	1.08
POWER kW	0.99	0.99	0.99	1.00	1.01	1.01	1.02

- NOTES: 1. Multiply correction factor times gross performance data.
 2. Resulting sensible capacity cannot exceed total capacity.

[] Designates Metric Conversions

COMPONENT AIR RESISTANCE, IWC-B090/C090/H090 7.5 TON [26.4 kW]

Component	Standard Indoor Airflow—CFM [L/s]							
	2400 [1133]	2600 [1227]	2800 [1321]	3000 [1416]	3200 [1510]	3400 [1604]	3600 [1699]	
Wet Coil	0.047 [0.012]	0.051 [0.013]	0.055 [0.014]	0.060 [0.015]	0.065 [0.016]	0.071 [0.018]	0.076 [0.019]	
Concentric Diffuser RXRN-FA65 or FA75 & Transition RXMC-CD04	DNA	.017 [0.042]	.020 [0.050]	.025 [0.062]	.031 [0.077]	.037 [0.092]	DNA	
Concentric Diffuser RXRN-AA61 or AA71 & Transition RXMC-CE05	DNA	DNA	DNA	DNA	DNA	DNA	.017 [0.042]	
Economizer 100% R.A. Damper Open	0.05 [0.012]	0.06 [0.015]	0.07 [0.017]	0.08 [0.020]	0.09 [0.022]	0.10 [0.025]	0.11 [0.027]	
Horizontal Economizer 100% R.A. Damper Open	0.03 [0.007]	0.04 [0.009]	0.04 [0.010]	0.05 [0.011]	0.05 [0.012]	0.06 [0.014]	0.06 [0.015]	
Horizontal Economizer 100% O.A. Damper Open	0.08 [0.020]	0.08 [0.020]	0.08 [0.020]	0.10 [0.024]	0.11 [0.027]	0.12 [0.030]	0.13 [0.032]	

NOTE: Add component resistance to duct resistance to determine total external static pressure.
 DNA = Data not Available.

AIR-FLOW PERFORMANCE – 8.5 TON RLNL B102/C102 MODELS/H102

Air Flow CFM [L/s]	Capacity 8.5 Ton [29.9 kW]																			
	External Static Pressure—Inches of Water [kPa]																			
	0.1 [0.2]	0.2 [0.5]	0.3 [0.7]	0.4 [1.0]	0.5 [1.12]	0.6 [1.5]	0.7 [1.7]	0.8 [2.0]	0.9 [2.2]	1.0 [2.5]	1.1 [2.7]	1.2 [3.0]	1.3 [3.2]	1.4 [3.5]	1.5 [3.7]	1.6 [4.0]	1.7 [4.2]	1.8 [4.5]	1.9 [4.7]	2.0 [5.0]
2700 [1274]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2800 [1321]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2900 [1369]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3000 [1416]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3100 [1463]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3200 [1510]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3300 [1557]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3400 [1605]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3500 [1652]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3600 [1699]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3700 [1746]	672	1361	700	1435	727	1510	755	1584	782	1659	810	1733	837	1808	865	1882	933	1956	953	1978
3800 [1793]	686	1443	713	1518	741	1592	768	1667	796	1741	823	1816	851	1890	878	1965	940	2003	960	2075
3900 [1841]	699	1526	727	1601	754	1675	782	1750	809	1824	837	1899	864	1973	927	2015	948	2080	968	2194
4000 [1888]	713	1609	740	1683	768	1758	795	1832	823	1907	850	1981	878	2056	935	2085	955	2199	975	2312
4100 [1935]	726	1692	754	1766	781	1841	809	1915	836	1990	864	2064	892	2091	942	2204	963	2318	983	2431

NOTE: L-Drive left of bold line, M-Drive right of bold line.

Drive Package	L, R						M, S					
Motor H.P. [W]	2.0 [1491.4]						3.0 [2237.1]					
Blower Sheave	BK90						BK65					
Motor Sheave	1VP-44						1VP-44					
Turns Open	1	2	3	4	5	6	1	2	3	4	5	6
RPM	860	824	791	757	723	690	1098	1049	999	949	899	849

- NOTES: 1. Factory sheave settings are shown in bold print.
 2. Re-adjustment of sheave required to achieve rated airflow at ARI minimum E.S.P.
 3. Do not operate above blower RPM shown as motor overloading will occur.
 4. Do not set motor sheave below one turn open.

COMPONENT AIR RESISTANCE, IWC-B102/C102/H102 8.5 TON [29.9 kW]

Component	Standard Indoor Airflow—CFM [L/s]												Resistance—Inches Water [kPa]											
	2600 [1227]	2800 [1321]	3000 [1416]	3200 [1510]	3400 [1604]	3600 [1699]	3800 [1793]	4000 [1888]	4200 [1982]	2600 [1227]	2800 [1321]	3000 [1416]	3200 [1510]	3400 [1604]	3600 [1699]	3800 [1793]	4000 [1888]	4200 [1982]						
	Wet Coil	0.051 [0.013]	0.055 [0.014]	0.060 [0.015]	0.065 [0.016]	0.071 [0.018]	0.076 [0.019]	0.082 [0.020]	0.087 [0.022]	0.093 [0.023]	DNA	DNA	DNA	DNA	DNA	DNA	DNA	DNA	DNA					
Concentric Diffuser RXRN-FA65 or FA75 & Transition RXMC-CD04	0.17 [0.042]	0.20 [0.050]	0.25 [0.062]	0.31 [0.077]	0.37 [0.092]	DNA	DNA	DNA	DNA	0.06 [0.015]	0.07 [0.017]	0.08 [0.020]	0.09 [0.022]	0.10 [0.025]	0.11 [0.027]	0.12 [0.030]	0.13 [0.032]	0.14 [0.035]						
Concentric Diffuser RXRN-AA61 or AA71 & Transition RXMC-CE05	DNA	DNA	DNA	DNA	DNA	DNA	DNA	DNA	DNA	0.06 [0.015]	0.07 [0.017]	0.08 [0.020]	0.09 [0.022]	0.10 [0.025]	0.11 [0.027]	0.12 [0.030]	0.13 [0.032]	0.14 [0.035]						
Economizer	0.04 [0.009]	0.04 [0.010]	0.04 [0.011]	0.04 [0.012]	0.04 [0.013]	0.04 [0.014]	0.04 [0.015]	0.04 [0.016]	0.04 [0.017]	0.04 [0.018]	0.04 [0.019]	0.04 [0.020]	0.04 [0.021]	0.04 [0.022]	0.04 [0.023]	0.04 [0.024]	0.04 [0.025]	0.04 [0.026]	0.04 [0.027]					
100% R.A. Damper Open	0.08 [0.020]	0.08 [0.021]	0.08 [0.022]	0.08 [0.023]	0.08 [0.024]	0.08 [0.025]	0.08 [0.026]	0.08 [0.027]	0.08 [0.028]	0.08 [0.029]	0.08 [0.030]	0.08 [0.031]	0.08 [0.032]	0.08 [0.033]	0.08 [0.034]	0.08 [0.035]	0.08 [0.036]	0.08 [0.037]	0.08 [0.038]					
Horizontal Economizer	0.08 [0.020]	0.08 [0.021]	0.08 [0.022]	0.08 [0.023]	0.08 [0.024]	0.08 [0.025]	0.08 [0.026]	0.08 [0.027]	0.08 [0.028]	0.08 [0.029]	0.08 [0.030]	0.08 [0.031]	0.08 [0.032]	0.08 [0.033]	0.08 [0.034]	0.08 [0.035]	0.08 [0.036]	0.08 [0.037]	0.08 [0.038]					
100% R.A. Damper Open	0.08 [0.020]	0.08 [0.021]	0.08 [0.022]	0.08 [0.023]	0.08 [0.024]	0.08 [0.025]	0.08 [0.026]	0.08 [0.027]	0.08 [0.028]	0.08 [0.029]	0.08 [0.030]	0.08 [0.031]	0.08 [0.032]	0.08 [0.033]	0.08 [0.034]	0.08 [0.035]	0.08 [0.036]	0.08 [0.037]	0.08 [0.038]					
Horizontal Economizer	0.08 [0.020]	0.08 [0.021]	0.08 [0.022]	0.08 [0.023]	0.08 [0.024]	0.08 [0.025]	0.08 [0.026]	0.08 [0.027]	0.08 [0.028]	0.08 [0.029]	0.08 [0.030]	0.08 [0.031]	0.08 [0.032]	0.08 [0.033]	0.08 [0.034]	0.08 [0.035]	0.08 [0.036]	0.08 [0.037]	0.08 [0.038]					
100% O.A. Damper Open	0.08 [0.020]	0.08 [0.021]	0.08 [0.022]	0.08 [0.023]	0.08 [0.024]	0.08 [0.025]	0.08 [0.026]	0.08 [0.027]	0.08 [0.028]	0.08 [0.029]	0.08 [0.030]	0.08 [0.031]	0.08 [0.032]	0.08 [0.033]	0.08 [0.034]	0.08 [0.035]	0.08 [0.036]	0.08 [0.037]	0.08 [0.038]					

NOTE: Add component resistance to duct resistance to determine total external static pressure.
 DNA = Data not Available.

AIRFLOW CORRECTION FACTORS-B102/C102/H102 8.5 TON [29.9 kW]

ACTUAL—CFM [L/s]	2600 [1227]	2800 [1321]	3000 [1416]	3200 [1510]	3400 [1605]	3600 [1699]	3800 [1793]	4000 [1888]	4200 [1982]
TOTAL MBH	0.96	0.97	0.98	0.99	1.00	1.01	1.02	1.03	1.04
SENSIBLE MBH	0.88	0.91	0.94	0.97	1.00	1.03	1.05	1.07	1.09
POWER kW	0.99	0.99	0.99	1.00	1.00	1.01	1.01	1.02	1.03

- NOTES: 1. Multiply correction factor times gross performance data.
 2. Resulting sensible capacity cannot exceed total capacity.

[] Designates Metric Conversions

AIR-FLOW PERFORMANCE – 10 TON RLNL MODELS

Air Flow CFM [L/s]	Capacity 10 Ton [35.2 kW]																							
	External Static Pressure—Inches of Water [kPa]																							
	0.1 [0.02]	0.2 [0.05]	0.3 [0.07]	0.4 [0.10]	0.5 [0.12]	0.6 [0.15]	0.7 [0.17]	0.8 [0.20]	0.9 [0.22]	1.0 [0.25]	1.1 [0.27]	1.2 [0.30]	1.3 [0.32]	1.4 [0.35]	1.5 [0.37]	1.6 [0.40]	1.7 [0.42]	1.8 [0.45]	1.9 [0.47]	2.0 [0.50]	2.1 [0.52]	2.2 [0.55]	2.3 [0.57]	
3200 [1510]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3300 [1557]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3400 [1605]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3500 [1652]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3600 [1699]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3700 [1746]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3800 [1793]	686	1443	713	1518	741	1592	768	1667	796	1741	823	1818	861	1890	878	1965	940	2003	960	2075	988	2307	1008	2421
3900 [1841]	699	1526	727	1601	754	1675	782	1750	809	1824	837	1899	864	1973	927	2015	948	2080	968	2194	988	2307	1008	2421
4000 [1888]	713	1609	740	1683	768	1758	795	1832	823	1907	850	1961	878	2056	935	2085	955	2199	975	2312	996	2426	1016	2539
4100 [1935]	726	1692	754	1766	781	1841	809	1915	836	1990	864	2064	922	2091	942	2204	963	2318	983	2431	1003	2545	1024	2658
4200 [1982]	740	1774	767	1849	795	1923	822	1998	850	2072	877	2147	930	2209	950	2323	970	2438	990	2550	1011	2663	1031	2777
4300 [2029]	753	1857	781	1932	808	2006	836	2081	853	2155	917	2215	937	2328	957	2442	978	2555	998	2668	1018	2782	1039	2896
4400 [2077]	767	1940	794	2014	822	2089	849	2163	877	2238	924	2333	945	2447	965	2560	985	2674	1006	2787	1026	2901	1046	3014
4500 [2124]	780	2023	808	2097	835	2172	863	2248	912	2338	932	2452	952	2565	973	2679	993	2793	1013	2906	1033	3020	1054	3133
4600 [2171]	794	2105	821	2180	840	2254	876	2329	919	2457	940	2571	960	2684	980	2798	1000	2911	1021	3025	1041	3138	1110	3247
4700 [2218]	807	2188	835	2263	862	2337	906	2462	927	2576	947	2689	967	2803	988	2916	1008	3030	1028	3143	1048	3257	1069	3371
4800 [2265]	821	2271	848	2345	876	2420	914	2581	934	2695	955	2808	975	2922	995	3035	1015	3149	1036	3262	1056	3376	1076	3489

NOTE: L-Drive left of bold line, M-Drive right of bold line.

Drive Package	L, R		M, S																									
	Motor H.P. [W]	2.0 [1491.4]		3.0 [2237.1]																								
Blower Sheave	BK90		BK65																									
Motor Sheave	1VP-44		1VP-44																									
Turns Open	1	2	3	4	5	6																						
RPM	845	810	810	775	739	704	669	639	609	579	549	519	489	459	429	399	369	339	309	279	249	219	189	159	129	99	69	39

- NOTES: 1. Factory sheave settings are shown in bold print.
- 2. Re-adjustment of sheave required to achieve rated airflow at ARI minimum E.S.P.
- 3. Do not operate above blower RPM shown as motor overloading will occur.
- 4. Do not set motor sheave below one turn open.

AIRFLOW CORRECTION FACTORS 10 TON [35.2 kW]

ACTUAL—CFM [L/s]	3200 [1510]	3400 [1605]	3600 [1699]	3800 [1793]	4000 [1888]	4200 [1982]	4400 [2076]	4600 [2171]	4800 [2265]
TOTAL MBH	0.96	0.97	0.98	0.99	1.00	1.01	1.02	1.03	1.04
SENSIBLE MBH	0.91	0.93	0.95	0.97	1.00	1.02	1.05	1.07	1.09
POWER kW	0.98	0.98	0.99	0.99	1.00	1.00	1.01	1.01	1.01

- NOTES: 1. Multiply correction factor times gross performance data.
- 2. Resulting sensible capacity cannot exceed total capacity.

[] Designates Metric Conversions

COMPONENT AIR RESISTANCE, IWC 10 TON [35.2 kW]

Component	Standard Indoor Airflow—CFM [L/s]											
	3200 [1510]	3400 [1604]	3600 [1699]	3800 [1793]	4000 [1888]	4200 [1982]	4400 [2076]	4600 [2171]	4800 [2265]			
Wet Coil	0.065 [0.016]	0.071 [0.018]	0.076 [0.019]	0.082 [0.020]	0.087 [0.022]	0.093 [0.023]	0.099 [0.025]	0.105 [0.026]	0.110 [0.027]			
	0.31 [0.077]	0.37 [0.092]	DNA	DNA	DNA	DNA	DNA	DNA	DNA			
Concentric Diffuser RXRN-FA65 or FA75 & Transition RXMC-CD04	0.065 [0.016]	0.071 [0.018]	0.076 [0.019]	0.082 [0.020]	0.087 [0.022]	0.093 [0.023]	0.099 [0.025]	0.105 [0.026]	0.110 [0.027]			
Concentric Diffuser RXRN-AA61 or AA71 & Transition RXMC-CE05	DNA	DNA	DNA	DNA	DNA	DNA	DNA	DNA	DNA			
Concentric Diffuser RXRN-AA66 or AA76 & Transition RXMC-CF06	DNA	DNA	DNA	DNA	DNA	DNA	DNA	DNA	DNA			
Economizer	0.09 [0.022]	0.10 [0.025]	0.11 [0.027]	0.12 [0.030]	0.13 [0.032]	0.14 [0.035]	0.15 [0.037]	0.16 [0.040]	0.17 [0.042]			
100% R.A. Damper Open	0.05 [0.012]	0.06 [0.014]	0.06 [0.015]	0.07 [0.017]	0.08 [0.020]	0.09 [0.021]	0.09 [0.022]	0.10 [0.024]	0.10 [0.025]			
Horizontal Economizer	0.11 [0.027]	0.12 [0.030]	0.13 [0.032]	0.15 [0.036]	0.16 [0.040]	0.18 [0.044]	0.19 [0.047]	0.20 [0.050]	0.21 [0.052]			
100% O.A. Damper Open	0.05 [0.012]	0.06 [0.014]	0.06 [0.015]	0.07 [0.017]	0.08 [0.020]	0.09 [0.021]	0.09 [0.022]	0.10 [0.024]	0.10 [0.025]			

NOTE: Add component resistance to duct resistance to determine total external static pressure. DNA = Data not Available.

XX. HEATER KIT CHARACTERISTICS

TABLE A

AUXILIARY HEATER KITS CHARACTERISTICS AND APPLICATION (RLNL MODELS)

208/240V – 3 PHASE

208/240 VOLT, THREE PHASE, 60 HZ, AUXILIARY ELECTRIC HEATER KITS CHARACTERISTICS AND APPLICATION													
Single Power Supply for Both Unit and Heater Kit							Separate Power Supply for Both Unit and Heater Kit						
RHEEM Model Number	Heater Kit					Air Conditioner			Heater Kit		Air Conditioner		
	RXJJ-Heater Kit Nominal kW	No. of Sequence Steps	Rated Heater kW @ 208/240 V	Heater KBTU/Hr @ 208/240 V	Heater Amp. @ 208/240 V	Unit Min. Ckt. Ampacity @ 208-240V	Over Current Protective Device Size		Min. Ckt. Ampacity 208/240V	Max. Fuse Size 208/240V	Min. Circuit Ampacity 208/240V	Over Current Protective Device Size	
							Min./Max. @ 208 V	Min./Max. @ 240 V				Min./Max. @ 208 V	Min./Max. @ 240 V
RLNL-B073CL/RLNL-C073CL	No Heat	—	—	—	—	35/35	40/50	40/50	—	—	35/35	40/50	40/50
	CC10C	1	7.2/9.6	24.56/32.75	20/23.1	35/36	45/50	45/50	25/29	25/30	—	—	—
	CC15C	1	10.8/14.4	36.84/49.13	30/34.6	45/51	45/50	60/60	38/44	40/45	—	—	—
	CC20C	1	14.4/19.2	49.13/65.5	40/46.2	57/65	60/60	70/70	50/58	50/60	—	—	—
	CC30C	1	21.6/28.8	73.69/98.25	60/69.3	82/94	90/90	100/100	75/87	80/90	—	—	—
RLNL-B090CL/RLNL-C090CL/RLNL-H090CR	No Heat	—	—	—	—	43/43	45/50	45/50	—	—	43/43	45/50	45/50
	CC10C	1	7.2/9.6	24.56/32.75	20/23.1	43/43	50/50	50/50	25/29	25/30	—	—	—
	CC15C	1	10.8/14.4	36.84/49.13	30/34.6	48/54	50/50	60/60	38/44	40/45	—	—	—
	CC20C	1	14.4/19.2	49.13/65.5	40/46.2	60/68	60/60	70/70	50/58	50/60	—	—	—
	CC30C	1	21.6/28.8	73.69/98.25	60/69.3	85/97	90/90	100/100	75/87	80/90	—	—	—
	CC40C	1	28.8/38.4	98.25/131	80.1/92.4	111/126	125/125	150/150	101/116	110/125	—	—	—
RLNL-B102CL/RLNL-C102CL/RLNL-H102CR	No Heat	—	—	—	—	49/49	50/60	50/60	—	—	49/49	50/60	50/60
	CC10C	1	7.2/9.6	24.56/32.75	20/23.1	49/49	60/60	60/60	25/29	25/30	—	—	—
	CC15C	1	10.8/14.4	36.84/49.13	30/34.6	49/54	60/60	60/60	38/44	40/45	—	—	—
	CC20C	1	14.4/19.2	49.13/65.5	40/46.2	60/68	60/60	70/70	50/58	50/60	—	—	—
	CC30C	1	21.6/28.8	73.69/98.25	60/69.3	85/97	90/90	100/100	75/87	80/90	—	—	—
	CC40C	1	28.8/38.4	98.25/131	80.1/92.4	111/126	125/125	150/150	101/116	110/125	—	—	—
RLNL-B120CL/RLNL-C120CL/RLNL-H120CR	No Heat	—	—	—	—	49/49	50/60	50/60	—	—	49/49	50/60	50/60
	CC10C	1	7.2/9.6	24.56/32.75	20/23.1	49/49	60/60	60/60	25/29	25/30	—	—	—
	CC15C	1	10.8/14.4	36.84/49.13	30/34.6	49/54	60/60	60/60	38/44	40/45	—	—	—
	CC20C	1	14.4/19.2	49.13/65.5	40/46.2	60/68	60/60	70/70	50/58	50/60	—	—	—
	CC30C	1	21.6/28.8	73.69/98.25	60/69.3	85/97	90/90	100/100	75/87	80/90	—	—	—
	CC40C	1	28.8/38.4	98.25/131	80.1/92.4	111/126	125/125	150/150	101/116	110/125	—	—	—
	CC50C	1	36.1/48	123.16/163.75	100.1/115.5	136/155	150/150	175/175	126/145	150/150	—	—	—
RLNL-B151CL/RLNL-C151CL/RLNL-H151CR	No Heat	—	—	—	—	67/67	70/80	70/80	—	—	67/67	70/80	70/80
	CC10C	1	7.2/9.6	24.56/32.75	20/23.1	67/67	80/80	80/80	25/29	25/30	—	—	—
	CC15C	1	10.8/14.4	36.84/49.13	30/34.6	67/67	80/80	80/80	38/44	40/45	—	—	—
	CC20C	1	14.4/19.2	49.13/65.5	40/46.2	69/77	80/80	80/80	50/58	50/60	—	—	—
	CC30C	1	21.6/28.8	73.69/98.25	60/69.3	94/106	100/100	110/110	75/87	80/90	—	—	—
	CC40C	1	28.8/38.4	98.25/131	80.1/92.4	119/135	125/125	150/150	101/116	110/125	—	—	—
	CC50C	1	36.1/48	123.16/163.75	100.1/115.5	144/164	150/150	175/175	126/145	150/150	—	—	—
RLNL-B073CM/RLNL-C073CM	No Heat	—	—	—	—	35/35	40/50	40/50	—	—	35/35	40/50	40/50
	CC10C	1	7.2/9.6	24.56/32.75	20/23.1	35/36	45/50	45/50	25/29	25/30	—	—	—
	CC15C	1	10.8/14.4	36.84/49.13	30/34.6	45/51	45/50	60/60	38/44	40/45	—	—	—
	CC20C	1	14.4/19.2	49.13/65.5	40/46.2	57/65	60/60	70/70	50/58	50/60	—	—	—
	CC30C	1	21.6/28.8	73.69/98.25	60/60.3	82/94	90/90	100/100	75/87	80/90	—	—	—
RLNL-B090CM/RLNL-C090CM/RLNL-H090CS	No Heat	—	—	—	—	43/43	45/50	45/50	—	—	43/43	45/50	45/50
	CC10C	1	7.2/9.6	24.56/32.75	20/23.1	43/43	50/50	50/50	25/29	25/30	—	—	—
	CC15C	1	10.8/14.4	36.84/49.13	30/34.6	48/54	50/50	60/60	38/44	40/45	—	—	—
	CC20C	1	14.4/19.2	49.13/65.5	40/46.2	60/68	60/60	70/70	50/58	50/60	—	—	—
	CC30C	1	21.6/28.8	73.69/98.25	60/69.3	85/97	90/90	100/100	75/87	80/90	—	—	—
	CC40C	1	28.8/38.4	98.25/131	80.1/92.4	111/126	125/125	150/150	101/116	110/125	—	—	—
RLNL-B102CM/RLNL-C102CM/RLNL-H102CS	No Heat	—	—	—	—	54/54	55/60	55/60	—	—	54/54	55/60	55/60
	CC10C	1	7.2/9.6	24.56/32.75	20/23.1	54/54	60/60	60/60	25/29	25/30	—	—	—
	CC15C	1	10.8/14.4	36.84/49.13	30/34.6	54/60	60/60	60/60	38/44	40/45	—	—	—
	CC20C	1	14.4/19.2	49.13/65.5	40/46.2	67/75	70/70	80/80	50/58	50/60	—	—	—
	CC30C	1	21.6/28.8	73.69/98.25	60/69.3	92/103	100/100	110/110	75/87	80/80	—	—	—
	CC40C	1	28.8/38.4	98.25/131	80.1/92.4	117/132	125/125	150/150	101/116	110/125	—	—	—
RLNL-B120CM/RLNL-C120CM/RLNL-H120CS	No Heat	—	—	—	—	54/54	55/60	55/60	—	—	54/54	55/60	55/60
	CC10C	1	7.2/9.6	24.56/32.75	20/23.1	54/54	60/60	60/60	25/29	25/30	—	—	—
	CC15C	1	10.8/14.4	36.84/49.13	30/34.6	54/60	60/60	60/60	38/44	40/45	—	—	—
	CC20C	1	14.4/19.2	49.13/65.5	40/46.2	67/75	70/70	80/80	50/58	50/60	—	—	—
	CC30C	1	21.6/28.8	73.69/98.25	60/69.3	92/103	100/100	110/110	75/87	80/90	—	—	—
	CC40C	1	28.8/38.4	98.25/131	80.1/92.4	117/132	125/125	150/150	101/116	110/125	—	—	—
	CC50C	1	36.1/48	123.16/163.75	100.1/115.5	142/161	150/150	175/175	126/145	150/150	—	—	—
RLNL-B151CM/RLNL-C151CM/RLNL-H151CS	No Heat	—	—	—	—	71/71	75/90	75/90	—	—	71/71	75/90	75/90
	CC10C	1	7.2/9.6	24.56/32.75	20/23.1	71/71	80/90	80/90	25/29	25/30	—	—	—
	CC15C	1	10.8/14.4	36.84/49.13	30/34.6	71/71	80/90	80/90	38/44	40/45	—	—	—
	CC20C	1	14.4/19.2	49.13/65.5	40/46.2	74/82	80/90	90/90	50/58	50/60	—	—	—
	CC30C	1	21.6/28.8	73.69/98.25	60/69.3	99/111	100/100	125/125	75/87	80/90	—	—	—
	CC40C	1	28.8/38.4	98.25/131	80.1/92.4	111/126	125/125	150/150	101/116	110/125	—	—	—
	CC50C	1	36.1/48	123.16/163.75	100.1/115.5	149/168	150/150	175/175	126/145	150/150	—	—	—
RLNL-B090CN/RLNL-C090CN/RLNL-H090CT	No Heat	—	—	—	—	48/48	50/60	50/60	—	—	48/48	50/60	50/60
	CC10C	1	7.2/9.6	24.56/32.75	20/23.1	48/48	60/60	60/60	25/29	25/30	—	—	—
	CC15C	1	10.8/14.4	36.84/49.13	30/34.6	54/60	60/60	60/60	38/44	40/45	—	—	—
	CC20C	1	14.4/19.2	49.13/65.5	40/46.2	67/75	70/70	80/80	50/58	50/60	—	—	—
	CC30C	1	21.6/28.8	73.69/98.25	60/69.3	92/103	100/100	110/110	75/87	80/90	—	—	—
	CC40C	1	28.8/38.4	98.25/131	80.1/92.4	117/132	125/125	150/150	101/116	110/125	—	—	—

HEATER KIT CHARACTERISTICS

TABLE A

AUXILIARY HEATER KITS CHARACTERISTICS AND APPLICATION (RLNL MODELS) 480V – 3 PHASE

480 VOLT, THREE PHASE, 60 HZ, AUXILIARY ELECTRIC HEATER KITS CHARACTERISTICS AND APPLICATION													
Single Power Supply for Both Unit and Heater Kit							Separate Power Supply for Both Unit and Heater Kit						
RHEEM Model Number	Heater Kit					Air Conditioner			Heater Kit		Air Conditioner		
	RXJJ-Heater Kit Nominal kW	No. of Sequence Steps	Rated Heater kW @ 480 V	Heater KBTU/Hr @ 480 V	Heater Amp. @ 480 V	Unit Min. Ckt. Ampacity @ 480V	Over Current Protective Device Size		Min. Ckt. Ampacity 480V	Max. Fuse Size 480V	Min. Circuit Ampacity 480V	Over Current Protective Device Size	
							Min./Max. @ 480 V	Min./Max. @ 480 V				Min./Max. @ 480 V	Min./Max. @ 480 V
RLNL-B073DL/ RLNL-C073DL	No Heat	—	—	—	—	16	20/20	—	—	—	16	20/20	—
	CC10D	1	9.6	32.75	11.5	18	20/20	—	15	15	—	—	—
	CC15D	1	14.4	49.13	17.3	26	30/30	—	22	25	—	—	—
	CC20D	1	19.2	65.5	23.1	33	35/35	—	29	30	—	—	—
	CC30D	1	28.8	98.25	34.6	47	50/50	—	44	45	—	—	—
RLNL-B090DL/ RLNL-C090DL/ RLNL-H090DR	No Heat	—	—	—	—	21	25/25	—	—	—	21	25/25	—
	CC10D	1	9.6	32.75	11.5	21	25/25	—	15	15	—	—	—
	CC15D	1	14.4	49.13	17.3	27	30/30	—	22	25	—	—	—
	CC20D	1	19.2	65.5	23.1	34	35/35	—	29	30	—	—	—
	CC30D	1	28.8	98.25	34.6	49	50/50	—	44	45	—	—	—
	CC40D	1	38.4	131	46.2	63	70/70	—	58	60	—	—	—
RLNL-B102DL/ RLNL-C102DL/ RLNL-H102DR	No Heat	—	—	—	—	23	25/25	—	—	—	23	25/25	—
	CC10D	1	9.6	32.75	11.5	23	25/25	—	15	15	—	—	—
	CC15D	1	14.4	49.13	17.3	27	30/30	—	22	25	—	—	—
	CC20D	1	19.2	65.5	23.1	34	35/35	—	29	30	—	—	—
	CC30D	1	28.8	98.25	34.6	49	50/50	—	44	45	—	—	—
	CC40D	1	38.4	131	46.2	63	70/70	—	58	60	—	—	—
RLNL-B120DL/ RLNL-C120DL/ RLNL-H120DR	No Heat	—	—	—	—	25	25/30	—	—	—	25	25/30	—
	CC10D	1	9.6	32.75	11.5	25	30/30	—	15	15	—	—	—
	CC15D	1	14.4	49.13	17.3	27	30/30	—	22	25	—	—	—
	CC20D	1	19.2	65.5	23.1	34	35/35	—	29	30	—	—	—
	CC30D	1	28.8	98.25	34.6	49	50/50	—	44	45	—	—	—
	CC40D	1	38.4	131	46.2	63	70/70	—	58	60	—	—	—
	CC50D	1	48	163.75	57.7	78	80/80	—	73	80	—	—	—
RLNL-B151DL/ RLNL-C151DL/ RLNL-H151DR	No Heat	—	—	—	—	33	35/40	—	—	—	33	35/40	—
	CC10D	1	9.6	32.75	11.5	33	40/40	—	15	15	—	—	—
	CC15D	1	14.4	49.13	17.3	33	40/40	—	22	25	—	—	—
	CC20D	1	19.2	65.5	23.1	38	40/40	—	29	30	—	—	—
	CC30D	1	28.8	98.25	34.6	52	60/60	—	44	45	—	—	—
	CC40D	1	38.4	131	46.2	67	70/70	—	58	60	—	—	—
	CC50D	1	48	163.75	57.7	81	90/90	—	73	80	—	—	—
RLNL-B073DM/ RLNL-C073DM	No Heat	—	—	—	—	16	20/20	—	—	—	16	20/20	—
	CC10D	1	9.6	32.75	11.5	18	20/20	—	15	15	—	—	—
	CC15D	1	14.4	49.13	17.3	26	30/30	—	22	25	—	—	—
	CC20D	1	19.2	65.5	23.1	33	35/35	—	29	30	—	—	—
	CC30D	1	28.8	98.25	34.6	47	50/50	—	44	45	—	—	—
RLNL-B090DM/ RLNL-C090DM/ RLNL-H090DS	No Heat	—	—	—	—	21	25/25	—	—	—	21	25/25	—
	CC10D	1	9.6	32.75	11.5	21	25/25	—	15	15	—	—	—
	CC15D	1	14.4	49.13	17.3	27	30/30	—	22	25	—	—	—
	CC20D	1	19.2	65.5	23.1	34	35/35	—	29	30	—	—	—
	CC30D	1	28.8	98.25	34.6	49	50/50	—	44	45	—	—	—
	CC40D	1	38.4	131	46.2	63	70/70	—	58	60	—	—	—
RLNL-B102DM/ RLNL-C102DM/ RLNL-H102DS	No Heat	—	—	—	—	26	30/30	—	—	—	26	30/30	—
	CC10D	1	9.6	32.75	11.5	26	30/30	—	15	15	—	—	—
	CC15D	1	14.4	49.13	17.3	31	35/35	—	22	25	—	—	—
	CC20D	1	19.2	65.5	23.1	38	40/40	—	29	30	—	—	—
	CC30D	1	28.8	98.25	34.6	52	60/60	—	44	45	—	—	—
	CC40D	1	38.4	131	46.2	67	70/70	—	58	60	—	—	—
RLNL-B120DM/ RLNL-C120DM/ RLNL-H120DS	No Heat	—	—	—	—	28	30/35	—	—	—	28	30/35	—
	CC10D	1	9.6	32.75	11.5	28	30/35	—	15	15	—	—	—
	CC15D	1	14.4	49.13	17.3	31	35/35	—	22	25	—	—	—
	CC20D	1	19.2	65.5	23.1	38	40/40	—	29	30	—	—	—
	CC30D	1	28.8	98.25	34.6	52	60/60	—	44	45	—	—	—
	CC40D	1	38.4	131	46.2	67	70/70	—	58	60	—	—	—
	CC50D	1	48	163.75	57.7	81	90/90	—	73	80	—	—	—
RLNL-B151DM/ RLNL-C151DM/ RLNL-H151DS	No Heat	—	—	—	—	36	40/45	—	—	—	36	40/45	—
	CC10D	1	9.6	32.75	11.5	36	40/45	—	15	15	—	—	—
	CC15D	1	14.4	49.13	17.3	36	40/45	—	22	25	—	—	—
	CC20D	1	19.2	65.5	23.1	42	45/45	—	29	30	—	—	—
	CC30D	1	28.8	98.25	34.6	56	60/60	—	44	45	—	—	—
	CC40D	1	38.4	131	46.2	71	80/80	—	58	60	—	—	—
	CC50D	1	48	163.75	57.7	85	90/90	—	73	80	—	—	—
RLNL-B090DN/ RLNL-C090DN/ RLNL-H090DT	No Heat	—	—	—	—	24	25/30	—	—	—	24	25/30	—
	CC10D	1	9.6	32.75	11.5	24	30/30	—	15	15	—	—	—
	CC15D	1	14.4	49.13	17.3	31	35/35	—	22	25	—	—	—
	CC20D	1	19.2	65.5	23.1	38	40/40	—	29	30	—	—	—
	CC30D	1	28.8	98.25	34.6	52	60/60	—	44	45	—	—	—
	CC40D	1	38.4	131	46.2	67	70/70	—	58	60	—	—	—

HEATER KIT CHARACTERISTICS (continued)

TABLE A

AUXILIARY HEATER KITS CHARACTERISTICS AND APPLICATION (RLNL MODELS)

600V – 3 PHASE

600 VOLT, THREE PHASE, 60 HZ, AUXILIARY ELECTRIC HEATER KITS CHARACTERISTICS AND APPLICATION													
Single Power Supply for Both Unit and Heater Kit							Separate Power Supply for Both Unit and Heater Kit						
RHEEM Model Number	Heater Kit					Air Conditioner			Heater Kit		Air Conditioner		
	RXJJ-Heater Kit Nominal kW	No. of Sequence Steps	Rated Heater kW @ 600 V	Heater KBTU/Hr @ 600 V	Heater Amp. @ 600 V	Unit Min. Ckt. Ampacity @ 600V	Over Current Protective Device Size		Min. Ckt. Ampacity 600V	Max. Fuse Size 600V	Min. Circuit Ampacity 600V	Over Current Protective Device Size	
							Min./Max. @ 600 V	Min./Max. @ 600 V				Min./Max. @ 600 V	Min./Max. @ 600 V
RLNL-B073YL/ RLNL-C073YL	No Heat	—	—	—	—	13	15/15	—	—	—	13	15/15	—
	CC10Y	1	9.6	32.75	9.2	14	15/15	—	12	15	—	—	—
	CC15Y	1	14.4	49.13	13.9	20	20/20	—	18	20	—	—	—
	CC20Y	1	19.2	65.5	18.5	26	30/30	—	14	25	—	—	—
	CC30Y	1	28.8	98.25	27.7	38	40/40	—	35	35	—	—	—
RLNL-B090YL/ RLNL-C090YL	No Heat	—	—	—	—	16	20/20	—	—	—	16	20/20	—
	CC10Y	1	9.6	32.75	9.2	17	20/20	—	12	15	—	—	—
	CC15Y	1	14.4	49.13	13.9	23	25/25	—	18	20	—	—	—
	CC20Y	1	19.2	65.5	18.5	29	30/30	—	24	25	—	—	—
	CC30Y	1	28.8	98.25	27.7	40	40/40	—	35	35	—	—	—
	CC40Y	1	38.4	131	37	52	60/60	—	47	50	—	—	—
RLNL-B102YL/ RLNL-C102YL	No Heat	—	—	—	—	19	20/20	—	—	—	19	20/20	—
	CC10Y	1	9.6	32.75	9.2	19	20/20	—	12	15	—	—	—
	CC15Y	1	14.4	49.13	13.9	23	25/25	—	18	20	—	—	—
	CC20Y	1	19.2	65.5	18.5	29	30/30	—	24	25	—	—	—
	CC30Y	1	28.8	98.25	27.7	40	40/40	—	35	35	—	—	—
	CC40Y	1	38.4	131	37	52	60/60	—	47	50	—	—	—
RLNL-B120YL/ RLNL-C120YL	No Heat	—	—	—	—	19	20/20	—	—	—	19	20/20	—
	CC10Y	1	9.6	32.75	9.2	19	25/25	—	12	15	—	—	—
	CC15Y	1	14.4	49.13	13.9	23	25/25	—	18	20	—	—	—
	CC20Y	1	19.2	65.5	18.5	29	30/30	—	24	25	—	—	—
	CC30Y	1	28.8	98.25	27.7	40	40/40	—	35	35	—	—	—
	CC40Y	1	38.4	131	37	52	60/60	—	47	50	—	—	—
RLNL-B151YL/ RLNL-C151YL	No Heat	—	—	—	—	28	30/35	—	—	—	28	30/35	—
	CC10Y	1	9.6	32.75	9.2	28	30/35	—	12	15	—	—	—
	CC15D	1	14.4	49.13	13.9	28	30/35	—	18	20	—	—	—
	CC20Y	1	19.2	65.5	18.5	34	35/35	—	24	25	—	—	—
	CC30Y	1	28.8	98.25	27.7	45	45/45	—	35	35	—	—	—
	CC40Y	1	38.4	131	37	57	60/60	—	47	50	—	—	—
	CC50Y	1	48	163.75	46.2	68	70/70	—	58	60	—	—	—
RLNL-B073YM/ RLNL-C073YM	No Heat	—	—	—	—	13	15/15	—	—	—	13	15/15	—
	CC10Y	1	9.6	32.75	9.2	14	15/15	—	12	15	—	—	—
	CC15Y	1	14.4	49.13	13.9	20	20/20	—	18	20	—	—	—
	CC20Y	1	19.2	65.5	18.5	26	30/30	—	24	25	—	—	—
	CC30Y	1	28.8	98.25	27.7	38	40/40	—	35	35	—	—	—
RLNL-B090YM/ RLNL-C090YM	No Heat	—	—	—	—	16	20/20	—	—	—	16	20/20	—
	CC10Y	1	9.6	32.75	9.2	17	20/20	—	12	15	—	—	—
	CC15Y	1	14.4	49.13	13.9	23	25/25	—	18	20	—	—	—
	CC20Y	1	19.2	65.5	18.5	29	30/30	—	24	25	—	—	—
	CC30Y	1	28.8	98.25	27.7	40	40/40	—	35	35	—	—	—
	CC40Y	1	38.4	131	37	52	60/60	—	47	50	—	—	—
RLNL-B102YM/ RLNL-C102YM	No Heat	—	—	—	—	24	25/30	—	—	—	24	25/30	—
	CC10Y	1	9.6	32.75	9.2	24	30/30	—	12	15	—	—	—
	CC15Y	1	14.4	49.13	13.9	28	30/30	—	18	20	—	—	—
	CC20Y	1	19.2	65.5	18.5	34	35/35	—	24	25	—	—	—
	CC30Y	1	28.8	98.25	27.7	45	45/45	—	35	35	—	—	—
	CC40Y	1	38.4	131	37	57	60/60	—	47	50	—	—	—

HEATER KIT CHARACTERISTICS (continued)

TABLE A

AUXILIARY HEATER KITS CHARACTERISTICS AND APPLICATION (RLNL MODELS) 600V – 3 PHASE

600 VOLT, THREE PHASE, 60 HZ, AUXILIARY ELECTRIC HEATER KITS CHARACTERISTICS AND APPLICATION													
Single Power Supply for Both Unit and Heater Kit							Separate Power Supply for Both Unit and Heater Kit						
RHEEM Model Number	Heater Kit					Air Conditioner			Heater Kit		Air Conditioner		
	RXJJ-Heater Kit Nominal kW	No. of Sequence Steps	Rated Heater kW @ 600 V	Heater KBTU/Hr @ 600 V	Heater Amp. @ 600 V	Unit Min. Ckt. Ampacity @ 600V	Over Current Protective Device Size		Min. Ckt. Ampacity 600V	Max. Fuse Size 600V	Min. Circuit Ampacity 600V	Over Current Protective Device Size	
							Min./Max. @ 600 V	Min./Max. @ 600 V				Min./Max. @ 600 V	Min./Max. @ 600 V
RLNL-B120YM/ RLNL-C120YM	No Heat	—	—	—	—	24	25/30	—	—	—	24	25/30	—
	CC10Y	1	9.6	32.75	9.2	24	30/30	—	12	15	—	—	—
	CC15Y	1	14.4	49.13	13.9	28	30/30	—	18	20	—	—	—
	CC20Y	1	19.2	65.5	18.5	34	35/35	—	24	25	—	—	—
	CC30Y	1	28.8	98.25	27.7	45	45/45	—	35	35	—	—	—
	CC40Y	1	38.4	131	37	57	60/60	—	47	50	—	—	—
	CC50Y	1	48	163.75	46.2	68	70/70	—	58	60	—	—	—
RLNL-B151YM/ RLNL-C151YM	No Heat	—	—	—	—	28	30/35	—	—	—	28	30/35	—
	CC10Y	1	9.6	32.75	9.2	28	30/35	—	12	15	—	—	—
	CC15Y	1	14.4	49.13	13.9	28	30/35	—	18	20	—	—	—
	CC20Y	1	19.2	65.5	18.5	34	35/35	—	24	25	—	—	—
	CC30Y	1	28.8	98.25	27.7	45	45/45	—	35	35	—	—	—
	CC40Y	1	38.4	131	37	57	60/60	—	47	50	—	—	—
	CC50Y	1	48	163.75	46.2	68	70/70	—	58	60	—	—	—
RLNL-B090YN/ RLNL-C090YN	No Heat	—	—	—	—	21	25/25	—	—	—	21	25/25	—
	CC10Y	1	9.6	32.75	9.2	22	25/25	—	12	15	—	—	—
	CC15Y	1	14.4	49.13	13.9	28	30/30	—	18	20	—	—	—
	CC20Y	1	19.2	65.5	18.5	34	35/35	—	24	25	—	—	—
	CC30Y	1	28.8	98.25	27.7	45	45/45	—	35	35	—	—	—
	CC40Y	1	38.4	131	37	57	60/60	—	47	50	—	—	—

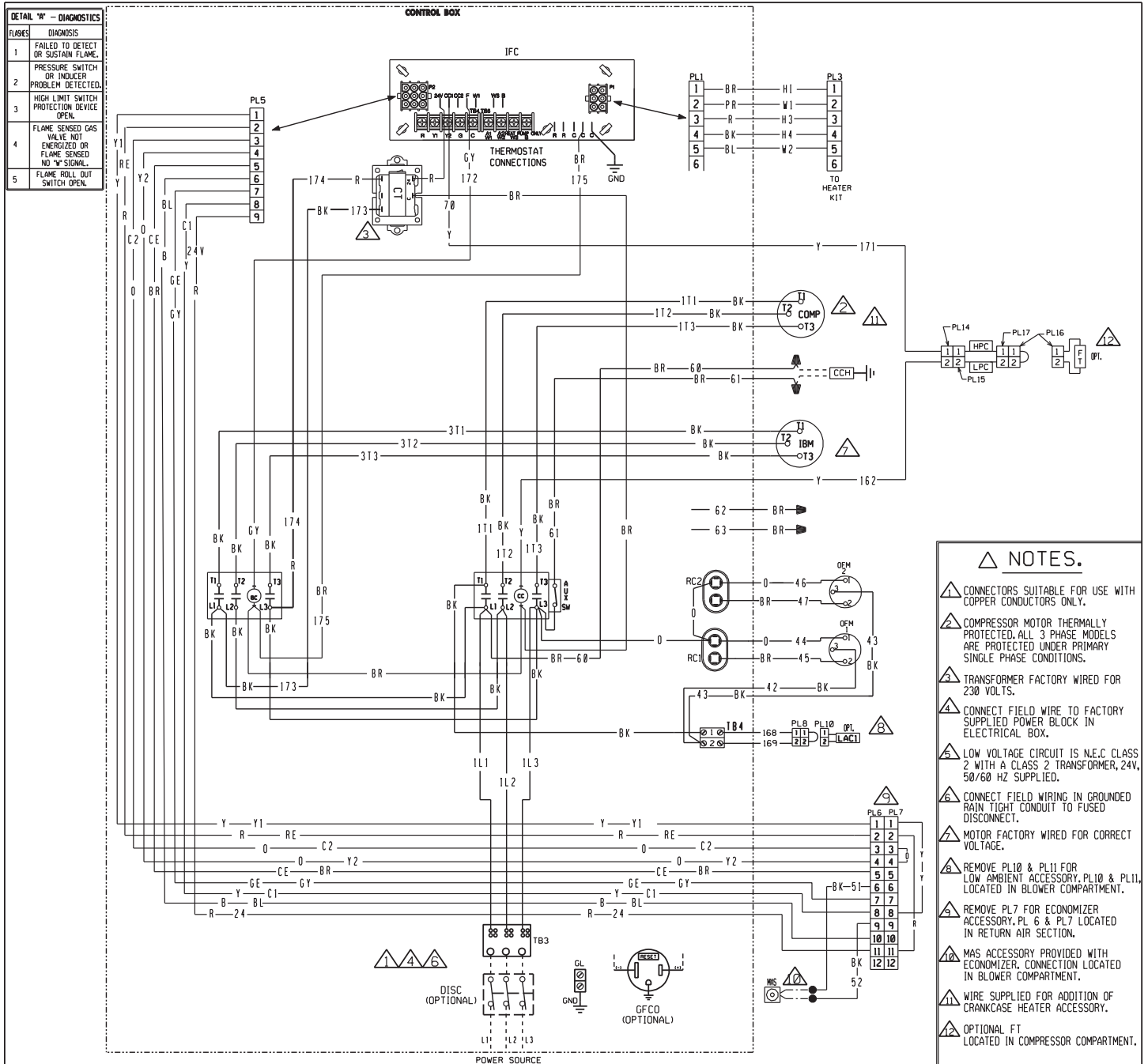
XXI. TROUBLE SHOOTING CHART

▲ WARNING

DISCONNECT ALL POWER TO UNIT BEFORE SERVICING. CONTACTOR MAY BREAK ONLY ONE SIDE. FAILURE TO SHUT OFF POWER CAN CAUSE ELECTRICAL SHOCK RESULTING IN PERSONAL INJURY OR DEATH.

SYMPTOM	POSSIBLE CAUSE	REMEDY
Unit will not run	<ul style="list-style-type: none"> Power off or loose electrical connection Thermostat out of calibration-set too high Defective contactor Blown fuses Transformer defective High pressure control open (if provided) Interconnecting low voltage wiring damaged 	<ul style="list-style-type: none"> Check for correct voltage at compressor contactor in control box Reset Check for 24 volts at contactor coil - replace if contacts are open Replace fuses Check wiring-replace transformer Reset-also see high head pressure remedy- Replace thermostat wiring
Condenser fan runs, compressor doesn't	<ul style="list-style-type: none"> Run capacitor defective (single phase only) Loose connection Compressor stuck, grounded or open motor winding open internal overload. Low voltage condition 	<ul style="list-style-type: none"> Replace Check for correct voltage at compressor - check & tighten all connections Wait at least 2 hours for overload to reset. If still open, replace the compressor. At compressor terminals, voltage must be within 10% of rating plate volts when unit is operating.
Insufficient cooling	<ul style="list-style-type: none"> Improperly sized unit Improper airflow Incorrect refrigerant charge Air, non-condensibles or moisture in system Incorrect voltage 	<ul style="list-style-type: none"> Recalculate load Check - should be approximately 400 CFM [188.78 L/s] per ton. Charge per procedure attached to unit service panel. Recover refrigerant, evacuate & recharge, add filter drier At compressor terminals, voltage must be within 10% of rating plate volts when unit is operating.
Compressor short cycles	<ul style="list-style-type: none"> Incorrect voltage Defective overload protector Refrigerant undercharge 	<ul style="list-style-type: none"> At compressor terminals, voltage must be \pm 10% of nameplate marking when unit is operating. Replace - check for correct voltage Add refrigerant
Registers sweat	<ul style="list-style-type: none"> Low evaporator airflow 	<ul style="list-style-type: none"> Increase speed of blower or reduce restriction - replace air filter
High head-low vapor pressures	<ul style="list-style-type: none"> Restriction in liquid line, expansion device or filter drier Flow check piston size too small Incorrect capillary tubes TXV does not open 	<ul style="list-style-type: none"> Remove or replace defective component Change to correct size piston Change coil assembly Replace TXV
High head-high or normal vapor pressure - Cooling mode	<ul style="list-style-type: none"> Dirty condenser coil Refrigerant overcharge Condenser fan not running Air or non-condensibles in system 	<ul style="list-style-type: none"> Clean coil Correct system charge Repair or replace Recover refrigerant, evacuate & recharge
High head-high or normal vapor pressure - Heating mode	<ul style="list-style-type: none"> Low air flow - condenser coil Refrigerant overcharge Air or non-condensibles in system Dirty condenser coil 	<ul style="list-style-type: none"> Check filters - correct to speed Correct system charge Recover refrigerant, evacuate & recharge Check filter - clean coil
Low head-high vapor pressures	<ul style="list-style-type: none"> Defective Compressor valves 	<ul style="list-style-type: none"> Replace compressor
Low vapor - cool compressor - iced evaporator coil	<ul style="list-style-type: none"> Low evaporator airflow Operating below 65°F outdoors Moisture in system TXV limiting refrigerant flow 	<ul style="list-style-type: none"> Increase speed of blower or reduce restriction - replace air filter Add Low Ambient Kit Recover refrigerant - evacuate & recharge - add filter drier Replace TXV
High vapor pressure	<ul style="list-style-type: none"> Excessive load Defective compressor 	<ul style="list-style-type: none"> Recheck load calculation Replace
Fluctuating head & vapor pressures	<ul style="list-style-type: none"> TXV hunting Air or non-condensibles in system 	<ul style="list-style-type: none"> Check TXV bulb clamp - check air distribution on coil - replace TXV Recover refrigerant, evacuate & recharge
Gurgle or pulsing noise at expansion device or liquid line	<ul style="list-style-type: none"> Air or non-condensibles in system 	<ul style="list-style-type: none"> Recover refrigerant, evacuate & recharge

XXII. WIRING DIAGRAMS



- NOTES.**
- ⚠ CONNECTORS SUITABLE FOR USE WITH COPPER CONDUCTORS ONLY.
 - ⚠ COMPRESSOR MOTOR THERMALLY PROTECTED, ALL 3 PHASE MODELS ARE PROTECTED UNDER PRIMARY SINGLE PHASE CONDITIONS.
 - ⚠ TRANSFORMER FACTORY WIRING FOR 230 VOLTS.
 - ⚠ CONNECT FIELD WIRE TO FACTORY SUPPLIED POWER BLOCK IN ELECTRICAL BOX.
 - ⚠ LOW VOLTAGE CIRCUIT IS N.E.C CLASS 2 WITH A CLASS 2 TRANSFORMER, 24V, 50/60 HZ SUPPLIED.
 - ⚠ CONNECT FIELD WIRING IN GROUNDED RAIN TIGHT CONDUIT TO FUSED DISCONNECT.
 - ⚠ MOTOR FACTORY WIRING FOR CORRECT VOLTAGE.
 - ⚠ REMOVE PL10 & PL11 FOR LOW AMBIENT ACCESSORY, PL10 & PL11 LOCATED IN BLOWER COMPARTMENT.
 - ⚠ REMOVE PL7 FOR ECONOMIZER ACCESSORY, PL 6 & PL7 LOCATED IN RETURN AIR SECTION.
 - ⚠ MAS ACCESSORY PROVIDED WITH ECONOMIZER, CONNECTION LOCATED IN BLOWER COMPARTMENT.
 - ⚠ WIRE SUPPLIED FOR ADDITION OF CRANKCASE HEATER ACCESSORY.
 - ⚠ OPTIONAL FT LOCATED IN COMPRESSOR COMPARTMENT.

COMPONENT CODE	
AUX SW	AUXILLIARY SWITCH
BC	BLOWER CONTACTOR
CC	COMPRESSOR CONTACTOR
CCH	CRANKCASE HEATER
COMP	COMPRESSOR
CT	CONTROL TRANSFORMER
DISC	DISCONNECT SWITCH
FLMS	FLAME SENSOR
FT	FREEZE STAT
GFCD	GROUND FAULT CONVENIENCE OUTLET
GND	GROUND
GV	GAS VALVE
HPC	HIGH PRESSURE CONTROL
IBM	INDOOR BLOWER MOTOR BELT DRIVE
IDM	INDUCED DRAFT MOTOR
IFC	INTEGRATED FURNACE CONTROL
LAC	LOW AMBIENT COOLING CONTROL
LC	LIMIT CONTROL
LPC	LOW PRESSURE CONTROL
MAS	MIX AIR SENSOR
MRLC	MANUAL RESET LIMIT CONTROL
NPC	NEGATIVE PRESSURE CONTROL
OPM	OUTDOOR FAN MOTOR
PL	PLUG
RC	RUN CAPACITOR
SE	SPARK ELECTRODE
TB	TERMINAL BLOCK
WN	WIRE NUT

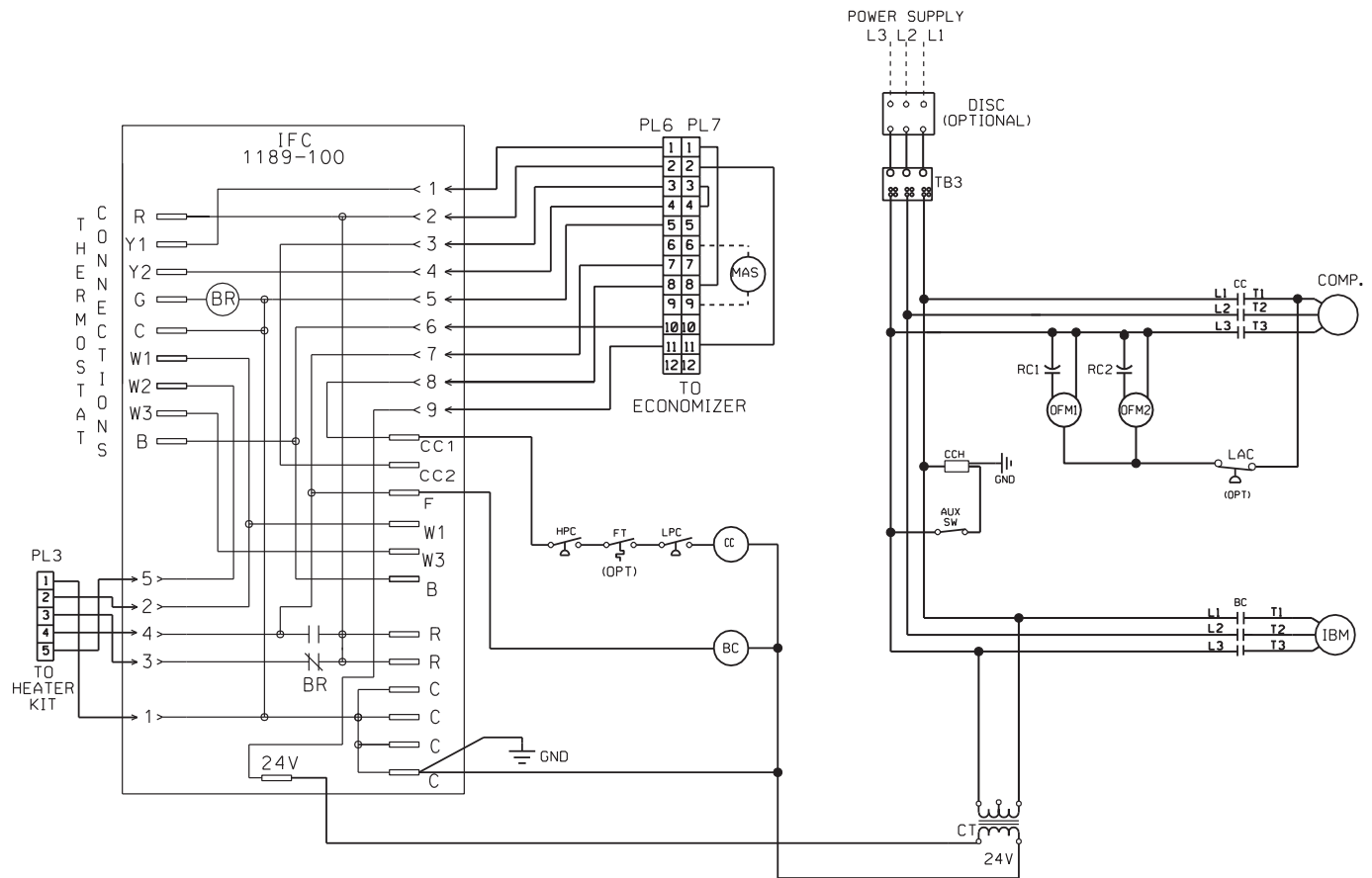
WIRING INFORMATION

LINE VOLTAGE
 -FACTORY STANDARD _____
 -FACTORY OPTION - - - - -
 -FIELD INSTALLED - - - - -
 LOW VOLTAGE
 -FACTORY STANDARD _____
 -FACTORY OPTION - - - - -
 -FIELD INSTALLED - - - - -
 REPLACEMENT WIRE
 -MUST BE THE SAME SIZE AND TYPE OF INSULATION AS ORIGINAL (105 C.MIN.)
 WARNING
 -CABINET MUST BE PERMANENTLY GROUNDED AND CONFORM TO I.E.C., N.E.C., C.E.C., NATIONAL WIRING REGULATIONS, AND LOCAL CODES AS APPLICABLE.

WIRE COLOR CODE	
BK	BLACK
BR	BROWN
BL	BLUE
G	GREEN
GY	GRAY
O	ORANGE
PR	PURPLE
R	RED
W	WHITE
Y	YELLOW

WIRING DIAGRAM
6 - 7 TON
 208-230/460/575V 3 PH, 60 HZ.
 200-220/380-415V, 3 PH, 50 HZ.

DR. BY	APP. BY	DATE	DWG. NO.	REV
MGR		5-19-08	90-102892-02	05



COMPONENT CODE

AUX SW	AUXILLIARY SWITCH	MAS	MIXED AIR SENSOR
BC	BLOWER MOTOR CONTACTOR	OFM	OUTDOOR FAN MOTOR
BR	BLOWER RELAY	OPT	OPTIONAL
CC	COMPRESSOR CONTACTOR	PL	PLUG
CCH	CRANKCASE HEATER	RC	RUN CAPACITOR
COMP	COMPRESSOR	TB	TERMINAL BLOCK
CT	CONTROL TRANSFORMER		
FT	FREEZE STAT		
GL	GROUND LUG		
GND	GROUND		
HPC	HIGH PRESSURE CONTROL		
IBM	INDOOR BLOWER MOTOR		
IFC	INTEGRATED FURNACE CONTROL		
LAC	LOW AMBIENT CONTROL		
LPC	LOW PRESSURE CONTROL		

WIRING INFORMATION

LINE VOLTAGE
 -FACTORY STANDARD _____
 -FACTORY OPTION - - - - -
 -FIELD INSTALLED - - - - -

LOW VOLTAGE
 -FACTORY STANDARD _____
 -FACTORY OPTION - - - - -
 -FIELD INSTALLED - - - - -

REPLACEMENT WIRE
 -MUST BE THE SAME SIZE AND TYPE OF INSULATION AS ORIGINAL (105° C MIN.)

WARNING
 -CABINET MUST BE PERMANENTLY GROUNDED AND CONFORM TO I.E.C., N.E.C., C.E.C., NATIONAL WIRING REGULATIONS, AND LOCAL CODES AS APPLICABLE.

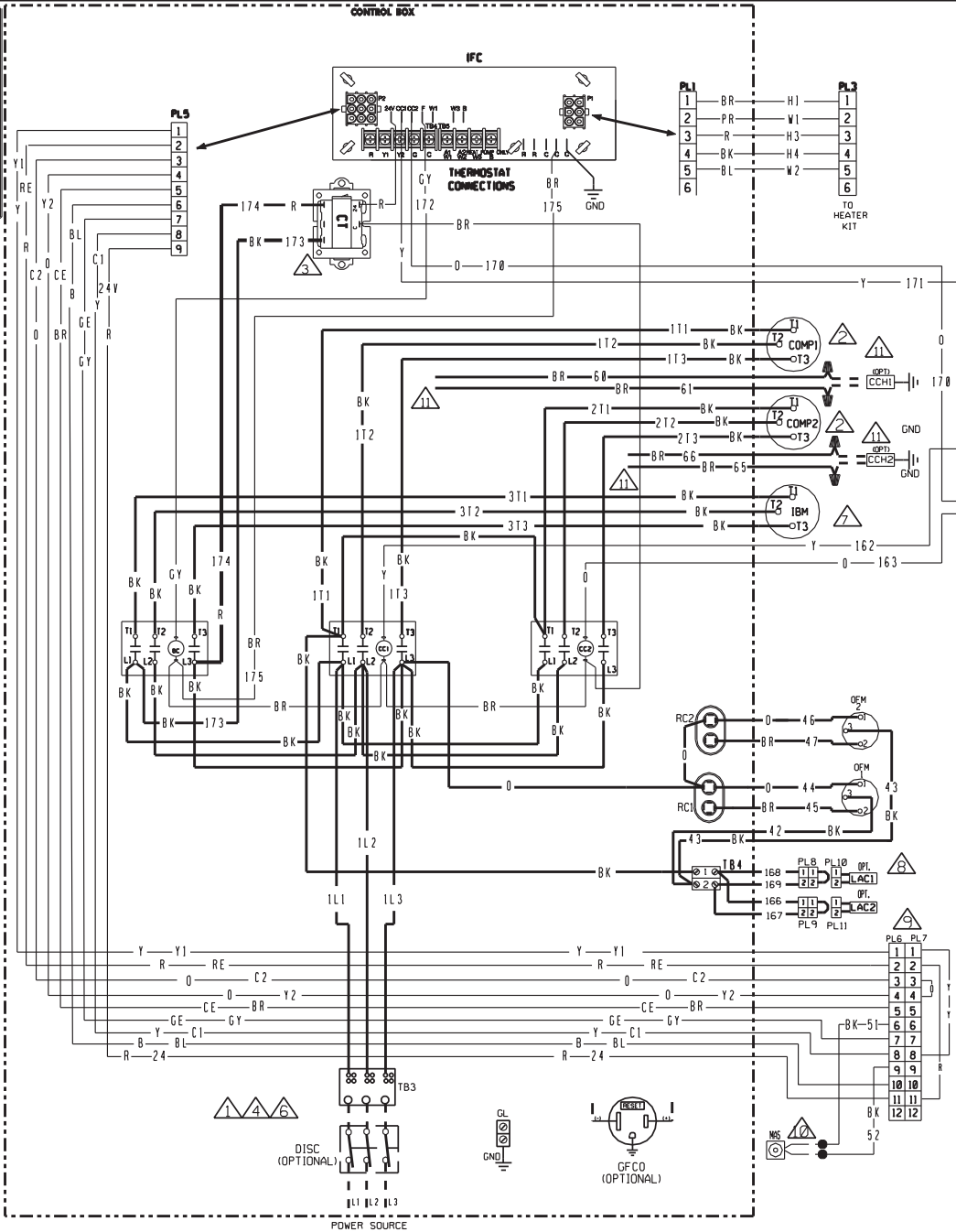
WIRE COLOR CODE

BK	BLACK	O	ORANGE
BR	BROWN	PR	PURPLE
BL	BLUE	R	RED
G	GREEN	W	WHITE
GY	GRAY	Y	YELLOW

WIRING SCHEMATIC
6 - 7 TON
 208-230/460/575V, 3PH, 60HZ.
 200-220/380-415V, 3 PH 50 HZ

DR. BY	APP. BY	DATE	DWG. NO.	REV
MGR		5-22-08	90-102893-02	03

FLIGHTS	DIAGNOSIS
1	FAILED TO DETECT OR SUSTAIN FLAME.
2	PRESSURE SWITCH OR INDUCER PROBLEM DETECTED.
3	HIGH LIMIT SWITCH PROTECTION DEVICE OPEN.
4	FLAME SENSED GAS VALVE NOT ENERGIZED OR FLAME SENSED NO "W" SIGNAL.
5	FLAME ROLL OUT SWITCH OPEN.



- ### NOTES.
- ⚠ CONNECTORS SUITABLE FOR USE WITH COPPER CONDUCTORS ONLY.
 - ⚠ COMPRESSOR MOTOR THERMALLY PROTECTED. ALL 3 PHASE MODELS ARE PROTECTED UNDER PRIMARY SINGLE PHASE CONDITIONS.
 - ⚠ TRANSFORMER FACTORY WIRED FOR 230 VOLTS.
 - ⚠ CONNECT FIELD WIRE TO FACTORY SUPPLIED POWER BLOCK IN ELECTRICAL BOX.
 - ⚠ LOW VOLTAGE CIRCUIT IS N.E.C CLASS 2 WITH A CLASS 2 TRANSFORMER, 24V, 50/60 HZ SUPPLIED.
 - ⚠ CONNECT FIELD WIRING IN GROUNDED RAIN TIGHT CONDUIT TO FUSED DISCONNECT.
 - ⚠ MOTOR FACTORY WIRED FOR CORRECT VOLTAGE.
 - ⚠ REMOVE PL10 & PL11 FOR LOW AMBIENT ACCESSORY. PL10 & PL11 LOCATED IN BLOWER COMPARTMENT.
 - ⚠ REMOVE PL7 FOR ECONOMIZER ACCESSORY. PL 6 & PL7 LOCATED IN RETURN AIR SECTION.
 - ⚠ MAS ACCESSORY PROVIDED WITH ECONOMIZER. CONNECTION LOCATED IN BLOWER COMPARTMENT.
 - ⚠ WIRE SUPPLIED FOR ADDITION OF CRANKCASE HEATER ACCESSORY. ATTACH TO L-1 & L-3 WHEN CRANKCASE HEATER IS INSTALLED.
 - ⚠ OPTIONAL FT LOCATED IN COMPRESSOR COMPARTMENT.

COMPONENT CODE

BC BLOWER CONTACTOR	LAC LOW AMBIENT COOLING CONTROL
CC COMPRESSOR CONTACTOR	LC LIMIT CONTROL
CCH CRANKCASE HEATER	LPC LOW PRESSURE CONTROL
COMP COMPRESSOR	MAS MIX AIR SENSOR
CT CONTROL TRANSFORMER	MRLC MANUAL RESET LIMIT CONTROL
DISC DISCONNECT SWITCH	NPC NEGATIVE PRESSURE CONTROL
FLMS FLAME SENSOR	OFM OUTDOOR FAN MOTOR
FT FREEZE STAT	PL PLUG
GFCO GROUND FAULT CONVENIENCE OUTLET	RC RUN CAPACITOR
GL GROUND LUG	SE SPARK ELECTRODE
GND GROUND	TB TERMINAL BLOCK
GV GAS VALVE	⚠ WIRE NUT
HPC HIGH PRESSURE CONTROL	
IBM INDOOR BLOWER MOTOR BELT DRIVE	
IDM INDUCED DRAFT MOTOR	
IFC INTEGRATED FURNACE CONTROL	

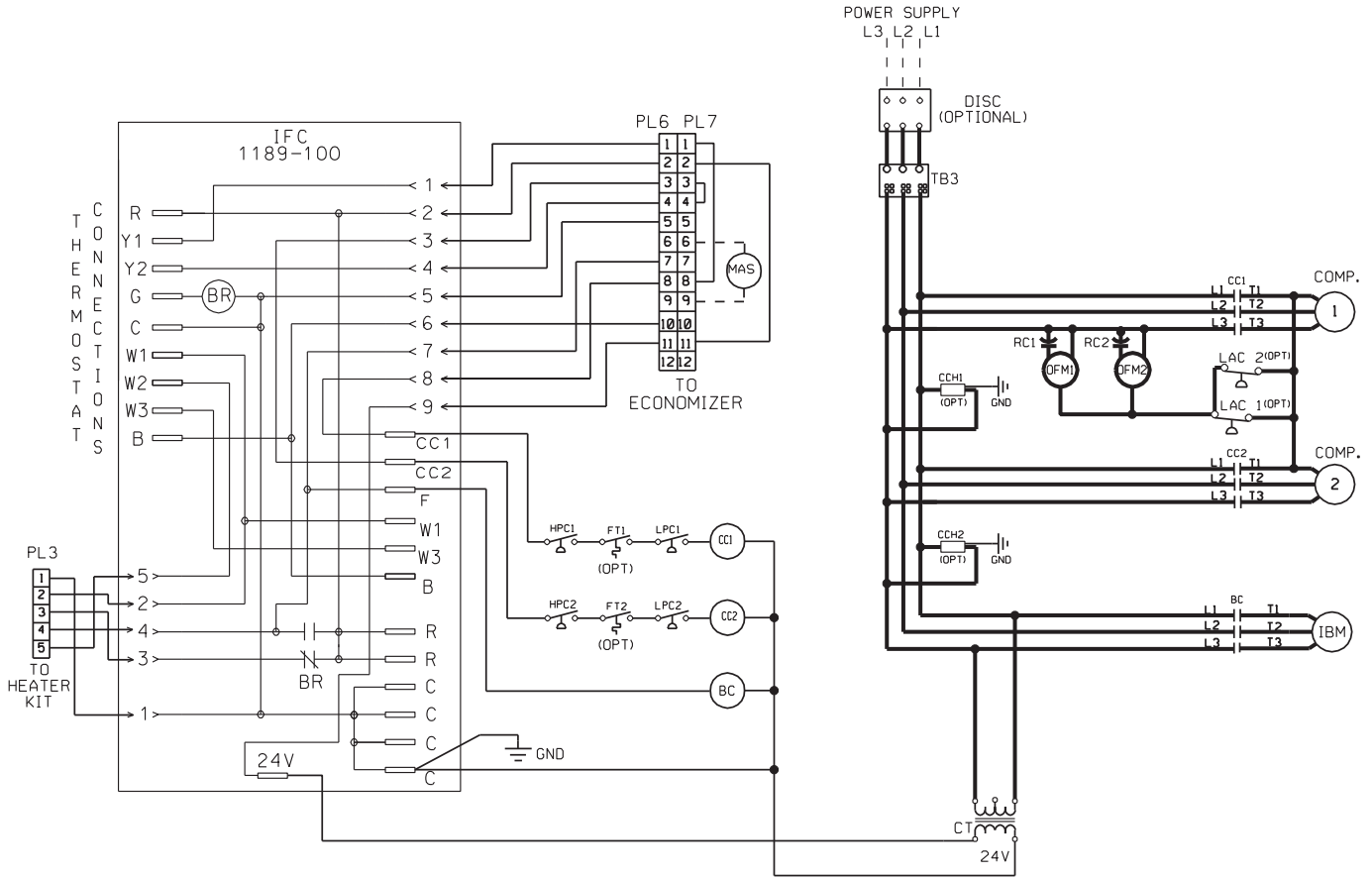
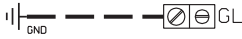
WIRE COLOR CODE

BK BLACK	O ORANGE
BR BROWN	PR PURPLE
BL BLUE	R RED
G GREEN	W WHITE
GY GRAY	Y YELLOW

WIRING DIAGRAM

090/102/120/150/151
 208-230/460/575V 3 PH, 60 HZ.
 200-220/380-415V, 3 PH, 50HZ

DR. BY	APP. BY	DATE	DWG. NO.	REV
MGR		5-19-08	90-102892-01	08



COMPONENT CODE

BC	BLOWER MOTOR CONTACTOR	MAS	MIXED AIR SENSOR
BR	BLOWER RELAY	OFM	OUTDOOR FAN MOTOR
CC	COMPRESSOR CONTACTOR	OPT	OPTIONAL
CCH	CRANKCASE HEATER	PL	PLUG
COMP	COMPRESSOR	RC	RUN CAPACITOR
CT	CONTROL TRANSFORMER	TB	TERMINAL BLOCK
FT	FREEZE STAT		
GL	GROUND LUG		
GND	GROUND		
HPC	HIGH PRESSURE CONTROL		
IBM	INDOOR BLOWER MOTOR		
IFC	INTEGRATED FURNACE CONTROL		
LAC	LOW AMBIENT CONTROL		
LPC	LOW PRESSURE CONTROL		

WIRE COLOR CODE

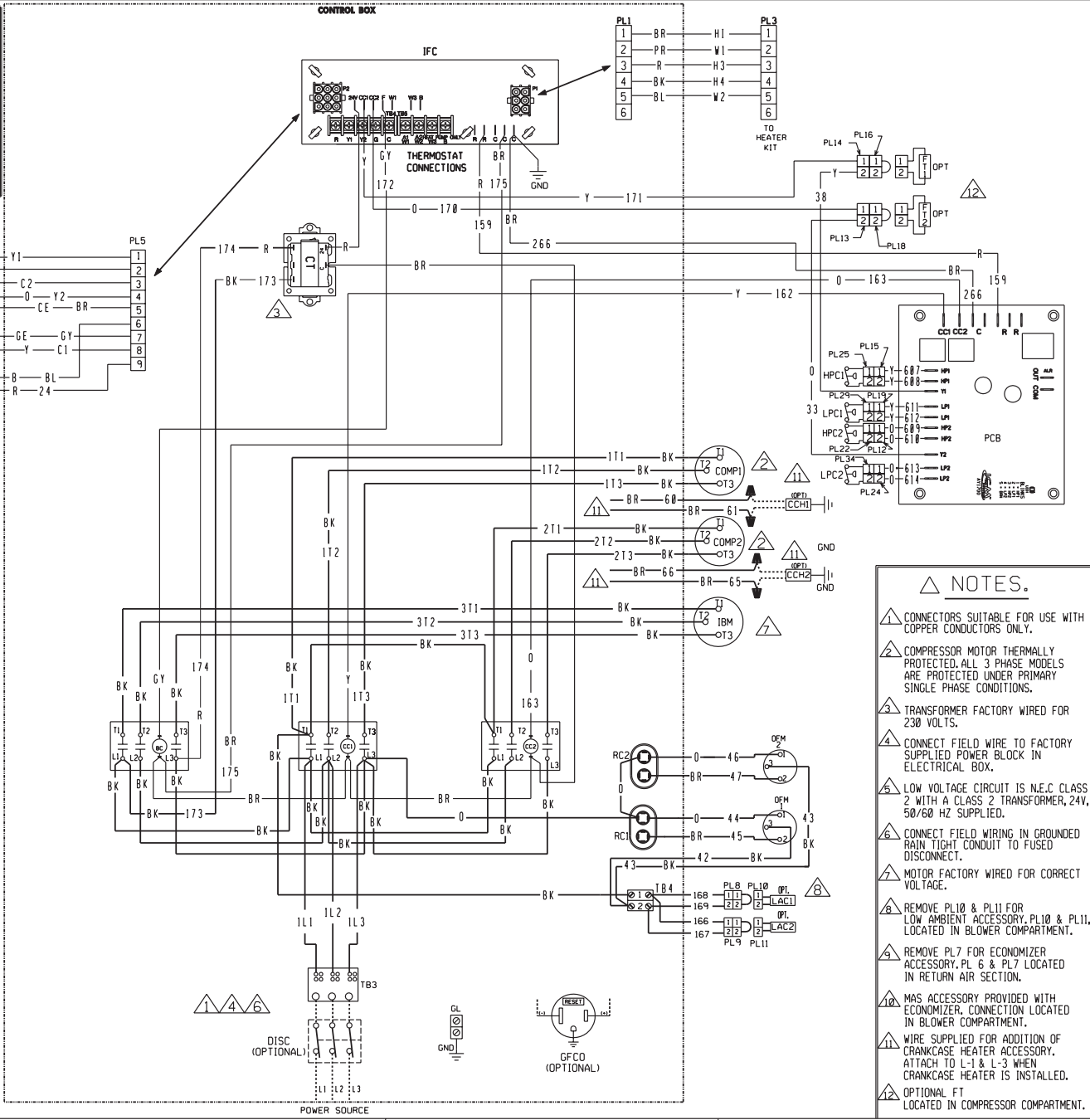
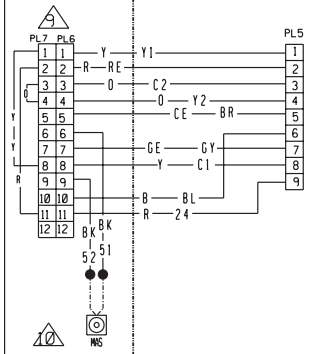
BK	BLACK	O	ORANGE
BR	BROWN	PR	PURPLE
BL	BLUE	R	RED
G	GREEN	W	WHITE
GY	GRAY	Y	YELLOW

WIRING SCHEMATIC
090/102/120/150/151

208-230, 3PH, 60HZ./460/575V, 3PH, 60HZ.
200-220/380-415V 3PH, 50HZ

DR. BY	APP. BY	DATE	DWG. NO.	REV
MGR		5-22-08	90-102893-01	05

DETAIL "A" - DIAGNOSTICS	
FLIGHTS	DIAGNOSIS
1	FAILED TO DETECT OR SUSTAIN FLAME.
2	PRESSURE SWITCH OR INDUCER PROBLEM DETECTED.
3	HIGH LIMIT SWITCH PROTECTION DEVICE OPEN.
4	FLAME SENSED GAS VALVE NOT ENERGIZED OR FLAME SENSED NO "W" SIGNAL.
5	FLAME ROLL OUT SWITCH OPEN.



- NOTES.**
- ⚠ CONNECTORS SUITABLE FOR USE WITH COPPER CONDUCTORS ONLY.
 - ⚠ COMPRESSOR MOTOR THERMALLY PROTECTED, ALL 3 PHASE MODELS ARE PROTECTED UNDER PRIMARY SINGLE PHASE CONDITIONS.
 - ⚠ TRANSFORMER FACTORY WIRED FOR 230 VOLTS.
 - ⚠ CONNECT FIELD WIRE TO FACTORY SUPPLIED POWER BLOCK IN ELECTRICAL BOX.
 - ⚠ LOW VOLTAGE CIRCUIT IS N.E.C CLASS 2 WITH A CLASS 2 TRANSFORMER, 24V, 50/60 HZ SUPPLIED.
 - ⚠ CONNECT FIELD WIRING IN GROUNDED RAIN TIGHT CONDUIT TO FUSED DISCONNECT.
 - ⚠ MOTOR FACTORY WIRED FOR CORRECT VOLTAGE.
 - ⚠ REMOVE PL10 & PL11 FOR LOW AMBIENT ACCESSORY, PL10 & PL11 LOCATED IN BLOWER COMPARTMENT.
 - ⚠ REMOVE PL7 FOR ECONOMIZER ACCESSORY, PL6 & PL7 LOCATED IN RETURN AIR SECTION.
 - ⚠ MAS ACCESSORY PROVIDED WITH ECONOMIZER, CONNECTION LOCATED IN BLOWER COMPARTMENT.
 - ⚠ WIRE SUPPLIED FOR ADDITION OF CRANKCASE HEATER ACCESSORY, ATTACH TO L-1 & L-3 WHEN CRANKCASE HEATER IS INSTALLED.
 - ⚠ OPTIONAL FT LOCATED IN COMPRESSOR COMPARTMENT.

COMPONENT CODE	
BC	BLOWER CONTACTOR
CC	COMPRESSOR CONTACTOR
CCH	CRANKCASE HEATER
COMP	COMPRESSOR
CT	CONTROL TRANSFORMER
DISC	DISCONNECT SWITCH
FLMS	FLAME SENSOR
FT	FREEZE STAT
GFCO	GROUND FAULT CONVENIENCE OUTLET
GL	GROUND LUG
GND	GROUND
GV	GAS VALVE
HPC	HIGH PRESSURE CONTROL
IBM	INDOOR BLOWER MOTOR BELT DRIVE
IDM	INDUCED DRAFT MOTOR
IFC	INTEGRATED FURNACE CONTROL
LAC	LOW AMBIENT COOLING CONTROL
LC	LIMIT CONTROL
LPC	LOW PRESSURE CONTROL
MAS	MIX AIR SENSOR
MRLC	MANUAL RESET LIMIT CONTROL
NPC	NEGATIVE PRESSURE CONTROL
OFM	OUTDOOR FAN MOTOR
PCB	PRESSURE CONTROL BOARD
PL	PLUG
RC	RUN CAPACITOR
SE	SPARK ELECTRODE
TB	TERMINAL BLOCK
▲	WIRE NUT

WIRING INFORMATION

LINE VOLTAGE
 -FACTORY STANDARD _____
 -FACTORY OPTION - - - - -
 -FIELD INSTALLED

LOW VOLTAGE
 -FACTORY STANDARD _____
 -FACTORY OPTION - - - - -
 -FIELD INSTALLED

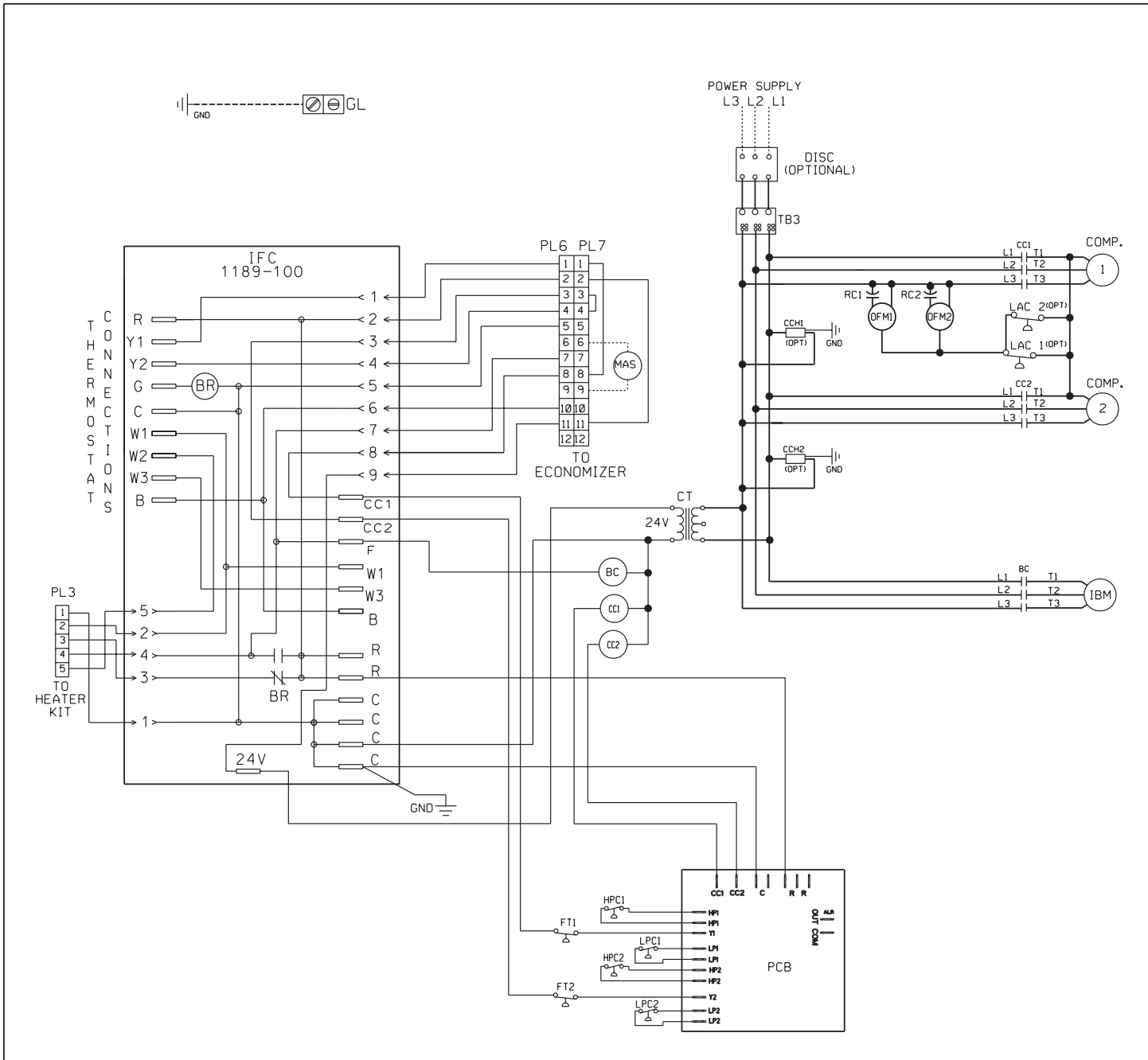
REPLACEMENT WIRE
 -MUST BE THE SAME SIZE AND TYPE OF INSULATION AS ORIGINAL (105 C° MIN.)

WARNING
 -CABINET MUST BE PERMANENTLY GROUNDED AND CONFORM TO I.E.C., N.E.C., C.E.C. AND LOCAL CODES AS APPLICABLE.

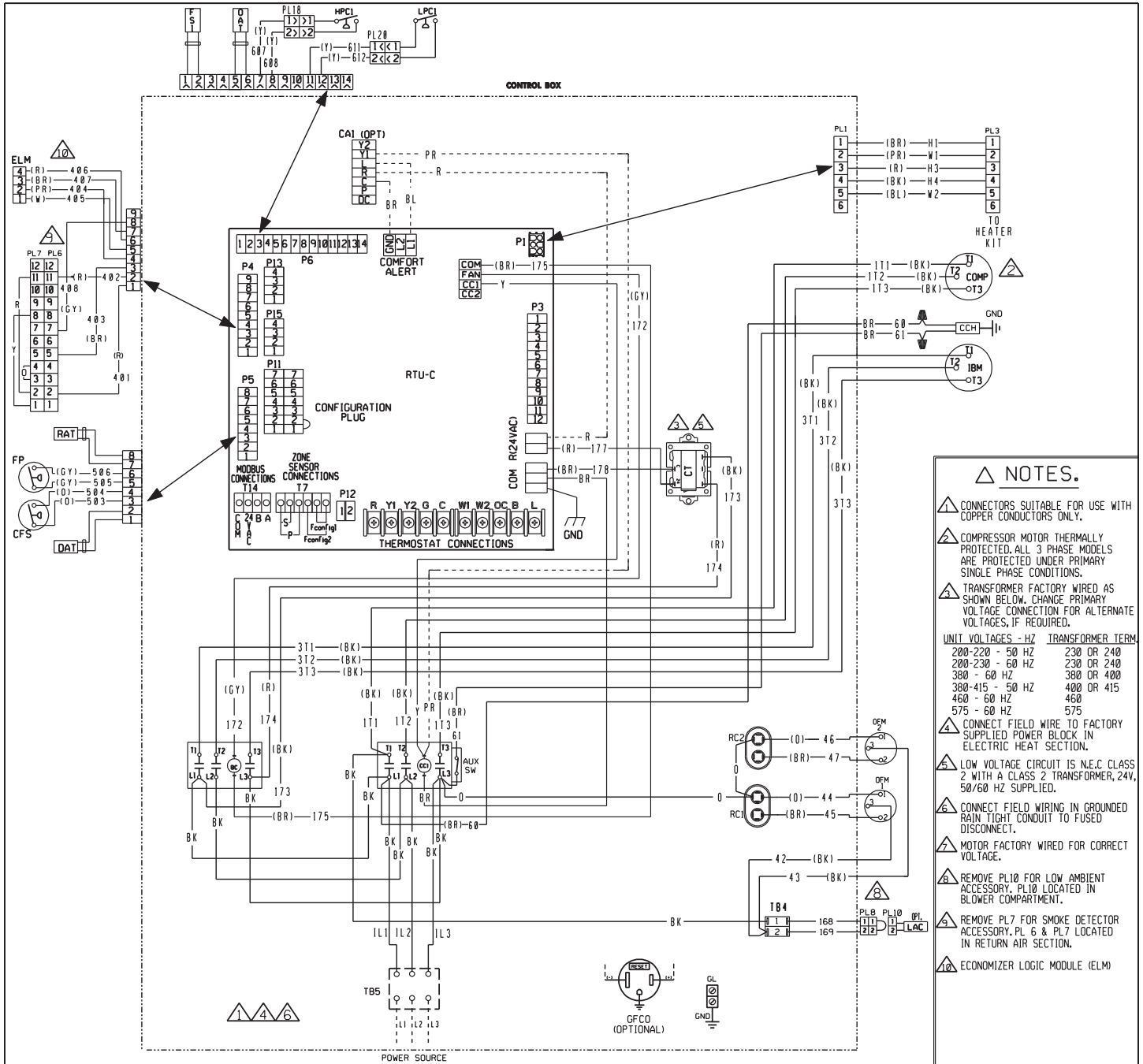
WIRE COLOR CODE			
BK	BLACK	O	ORANGE
BR	BROWN	PR	PURPLE
BL	BLUE	R	RED
G	GREEN	W	WHITE
GY	GRAY	Y	YELLOW

WIRING DIAGRAM
 (-)LKL/LNL-B151
 208-230/460/575V 3 PH, 60 HZ.
 200-220/380-415V, 3 PH, 50HZ

DR. BY	APP. BY	DATE	DWG. NO.	REV
MGR		8-14-12	90-102892-05	01



COMPONENT CODE				WIRING INFORMATION		WIRE COLOR CODE			
BC	BLOWER MOTOR CONTACTOR	MAS	MIXED AIR SENSOR	LINE VOLTAGE	_____	BK	BLACK	O	ORANGE
BR	BLOWER RELAY	OFM	OUTDOOR FAN MOTOR	-FACTORY STANDARD	_____	BR	BROWN	PR	PURPLE
CC	COMPRESSOR CONTACTOR	OPT	OPTIONAL	-FACTORY OPTION	.....	BL	BLUE	R	RED
CCH	CRANKCASE HEATER	PCB	PRESSURE CONTROL BOARD	-FIELD INSTALLED	.....	G	GREEN	W	WHITE
COMP	COMPRESSOR	PL	PLUG	LOW VOLTAGE	_____	GY	GRAY	Y	YELLOW
CT	CONTROL TRANSFORMER	RC	RUN CAPACITOR	-FACTORY STANDARD	_____	WIRING SCHEMATIC (-)LKL/LNL-B151 208-230, 3PH, 60HZ./460/575V, 3PH, 60HZ. 200-220/380-415V 3PH, 50HZ			
FT	FREEZE STAT	TB	TERMINAL BLOCK	-FACTORY OPTION	.....			
GL	GROUND LUG			-FIELD INSTALLED	.....	DR. BY APP. BY DATE DWG. NO. REV MGR _____ 8-16-12 90-102893-05 01			
GND	GROUND			REPLACEMENT WIRE	_____				
HPC	HIGH PRESSURE CONTROL			-MUST BE THE SAME SIZE AND TYPE OF INSULATION AS ORIGINAL (105° C MIN.)	_____				
IBM	INDOOR BLOWER MOTOR			WARNING	_____				
IFC	INTEGRATED FURNACE CONTROL			-CABINET MUST BE PERMANENTLY GROUNDED AND CONFORM TO I.E.C., N.E.C., C.E.C., NATIONAL WIRING REGULATIONS, AND LOCAL CODES AS APPLICABLE.	_____				
LAC	LOW AMBIENT CONTROL				_____				
LPC	LOW PRESSURE CONTROL				_____				



NOTES.

- ⚠ CONNECTORS SUITABLE FOR USE WITH COPPER CONDUCTORS ONLY.
- ⚠ COMPRESSOR MOTOR THERMALLY PROTECTED. ALL 3 PHASE MODELS ARE PROTECTED UNDER PRIMARY SINGLE PHASE CONDITIONS.
- ⚠ TRANSFORMER FACTORY WIRING AS SHOWN BELOW. CHANGE PRIMARY VOLTAGE CONNECTION FOR ALTERNATE VOLTAGES, IF REQUIRED.

UNIT VOLTAGES - HZ	TRANSFORMER TERM.
200-220 - 50 HZ	230 OR 240
200-230 - 60 HZ	230 OR 240
380 - 60 HZ	380 OR 400
380-415 - 50 HZ	400 OR 415
460 - 60 HZ	460
575 - 60 HZ	575

- ⚠ CONNECT FIELD WIRE TO FACTORY SUPPLIED POWER BLOCK IN ELECTRIC HEAT SECTION.
- ⚠ LOW VOLTAGE CIRCUIT IS N.E.C CLASS 2 WITH A CLASS 2 TRANSFORMER, 24V, 50/60 HZ SUPPLIED.
- ⚠ CONNECT FIELD WIRING IN GROUNDED RAIN TIGHT CONDUIT TO FUSED DISCONNECT.
- ⚠ MOTOR FACTORY WIRING FOR CORRECT VOLTAGE.
- ⚠ REMOVE PL10 FOR LOW AMBIENT ACCESSORY. PL10 LOCATED IN BLOWER COMPARTMENT.
- ⚠ REMOVE PL7 FOR SMOKE DETECTOR ACCESSORY. PL 6 & PL7 LOCATED IN RETURN AIR SECTION.
- ⚠ ECONOMIZER LOGIC MODULE (ELM)

COMPONENT CODE	
BC	BLOWER CONTACTOR
CA	COMFORT ALERT MODULE
CC	COMPRESSOR CONTACTOR
CCH	CRANKCASE HEATER
CFS	CLOGGED FILTER SWITCH
COMP	COMPRESSOR
CT	CONTROL TRANSFORMER
DAT	DISCHARGE AIR SENSOR
DISC	DISCONNECT SWITCH
FP	FAN PROWING
FS	FREEZE SENSOR
GFCO	GROUND FAULT CONVENIENCE OUTLET
GL	GROUND LUG
GND	GROUND
HPC	HIGH PRESSURE CONTROL
IBM	INDOOR BLOWER MOTOR BELT DRIVE
LAC	LOW AMBIENT COOLING CONTROL
LPC	LOW PRESSURE CONTROL
OAT	OUTSIDE AIR SENSOR
OFM	OUTDOOR FAN MOTOR
PL	PLUG
RAT	RETURN AIR SENSOR
RC	RUN CAPACITOR
RTU-C	ROOFTOP UNIT CONTROL
TB	TERMINAL BLOCK
W	WIRE NUT

WIRING INFORMATION

LINE VOLTAGE
 -FACTORY STANDARD _____
 -FACTORY OPTION - - - - -
 -FIELD INSTALLED - - - - -

LOW VOLTAGE
 -FACTORY STANDARD _____
 -FACTORY OPTION - - - - -
 -FIELD INSTALLED - - - - -

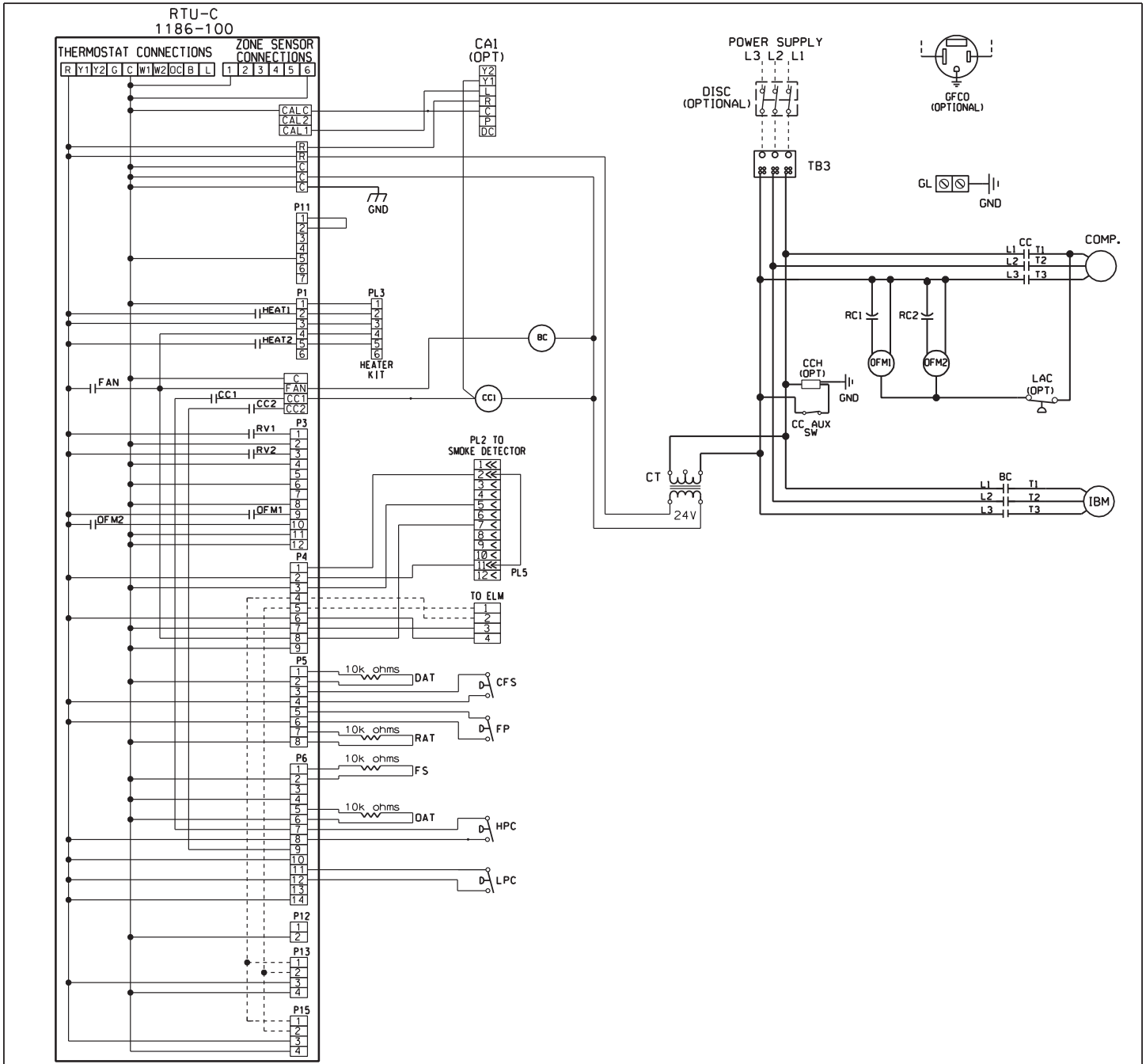
REPLACEMENT WIRE
 -MUST BE THE SAME SIZE AND TYPE OF INSULATION AS ORIGINAL (105° C MIN.)

WARNING
 -CABINET MUST BE PERMANENTLY GROUNDED AND CONFORM TO I.E.C., N.E.C., C.E.C., AND LOCAL CODES AS APPLICABLE.

WIRE COLOR CODE			
BK	BLACK	O	ORANGE
BR	BROWN	PR	PURPLE
BL	BLUE	R	RED
G	GREEN	W	WHITE
GY	GRAY	Y	YELLOW

WIRING DIAGRAM
6 - 7 TON
208-230/460/575V 3 PH, 60 HZ.
PACKAGED A/C W/RTU-C

DR. BY	APP. BY	DATE	DWG. NO.	REV
MGR		4-15-09	90-103089-04	03



COMPONENT CODE

BC BLOWER CONTACTOR
 CA COMFORT ALERT MODULE
 CC COMPRESSOR CONTACTOR
 CCH CRANKCASE HEATER
 CFS CLOGGED FILTER SWITCH
 COMP COMPRESSOR
 CT CONTROL TRANSFORMER
 DISC DISCONNECT SWITCH
 FP FAN PROVING
 FS FREEZE SENSOR
 GFCD GROUND FAULT CONVENIENCE OUTLET
 GL GROUND LUG
 GND GROUND
 HPC HIGH PRESSURE CONTROL
 IBM INDOOR BLOWER MOTOR BELT DRIVE

IFC INTEGRATED FURNACE CONTROL
 LAC LOW AMBIENT COOLING CONTROL
 LC LIMIT CONTROL
 LPC LOW PRESSURE CONTROL
 MAS MIX AIR SENSOR
 DAT OUTSIDE AIR SENSOR
 OFM OUTDOOR FAN MOTOR
 PL PLUG
 RAT RETURN AIR SENSOR
 RC RUN CAPACITOR
 SCC SPACE COMFORT CONTROL
 SE SPARK ELECTRODE
 TB TERMINAL BLOCK
 WIRE NUT

WIRING INFORMATION

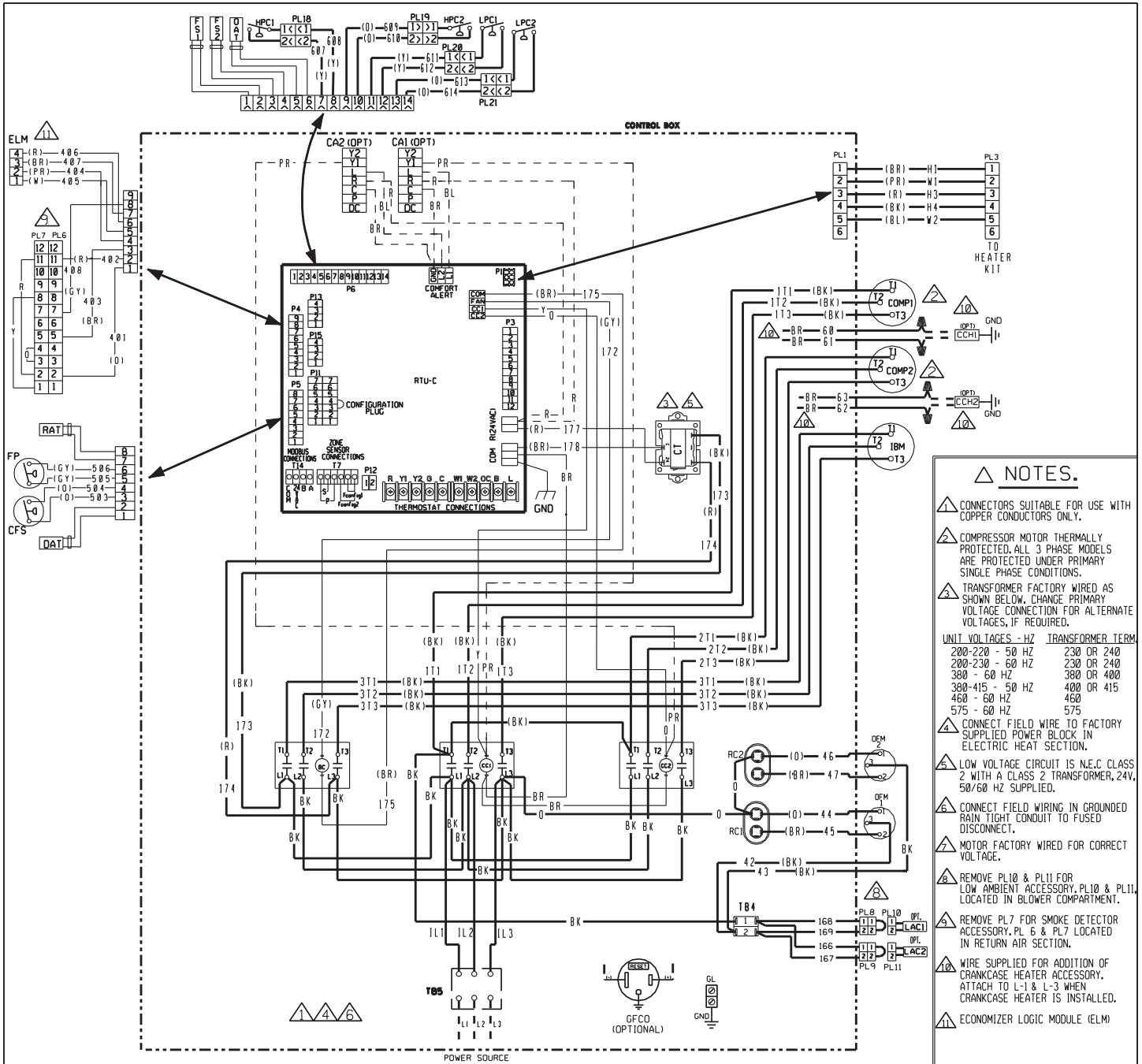
LINE VOLTAGE
 -FACTORY STANDARD _____
 -FACTORY OPTION -----
 -FIELD INSTALLED - - - - -
 LOW VOLTAGE
 -FACTORY STANDARD _____
 -FACTORY OPTION -----
 -FIELD INSTALLED - - - - -
 REPLACEMENT WIRE
 -MUST BE THE SAME SIZE AND TYPE OF INSULATION AS ORIGINAL (105° C MIN.)
 WARNING
 -CABINET MUST BE PERMANENTLY GROUNDED AND CONFORM TO I.E.C., N.E.C., C.E.C., AND LOCAL CODES AS APPLICABLE.

WIRE COLOR CODE

BK	BLACK	O	ORANGE
BR	BROWN	PR	PURPLE
BL	BLUE	R	RED
G	GREEN	W	WHITE
GY	GRAY	Y	YELLOW

WIRING SCHEMATIC
6 - 7 TON
 208-230/460/575V 3 PH, 60 HZ.
 PACKAGED A/C

DR. BY MGR	APP. BY	DATE 7-16-09	DWG. NO. 90-103246-04	REV 02
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- ### NOTES.
- ⚠ CONNECTORS SUITABLE FOR USE WITH COPPER CONDUCTORS ONLY.
 - ⚠ COMPRESSOR MOTOR THERMALLY PROTECTED. ALL 3 PHASE MODELS ARE PROTECTED UNDER PRIMARY SINGLE PHASE CONDITIONS.
 - ⚠ TRANSFORMER FACTORY WIRED AS SHOWN BELOW. CHANGE PRIMARY VOLTAGE CONNECTION FOR ALTERNATE VOLTAGES, IF REQUIRED.
- | UNIT VOLTAGES - HZ | | TRANSFORMER TERM. |
|--------------------|------------|-------------------|
| 200-220 - 50 HZ | 230 OR 240 | |
| 200-230 - 60 HZ | 230 OR 240 | |
| 380 - 60 HZ | 380 OR 400 | |
| 380-415 - 50 HZ | 400 OR 415 | |
| 460 - 60 HZ | 460 | |
| 575 - 60 HZ | 575 | |
- ⚠ CONNECT FIELD WIRE TO FACTORY SUPPLIED POWER BLOCK IN ELECTRIC HEAT SECTION.
 - ⚠ LOW VOLTAGE CIRCUIT IS N.E.C CLASS 2 WITH A CLASS 2 TRANSFORMER, 24V, 50/60 HZ SUPPLIED.
 - ⚠ CONNECT FIELD WIRING IN GROUNDED RAIN TIGHT CONDUIT TO FUSED DISCONNECT.
 - ⚠ MOTOR FACTORY WIRED FOR CORRECT VOLTAGE.
 - ⚠ REMOVE PL10 & PL11 FOR LOW AMBIENT ACCESSORY. PL10 & PL11 LOCATED IN BLOWER COMPARTMENT.
 - ⚠ REMOVE PL7 FOR SMOKE DETECTOR ACCESSORY. PL 6 & PL7 LOCATED IN RETURN AIR SECTION.
 - ⚠ WIRE SUPPLIED FOR ADDITION OF CRANKCASE HEATER ACCESSORY. ATTACH TO L-1 & L-3 WHEN CRANKCASE HEATER IS INSTALLED.
 - ⚠ ECONOMIZER LOGIC MODULE (ELM)

COMPONENT CODE

BC	BLOWER CONTACTOR	LAC	LOW AMBIENT COOLING CONTROL
CA	COMFORT ALERT MODULE	LPC	LOW PRESSURE CONTROL
CC	COMPRESSOR CONTACTOR	OAT	OUTSIDE AIR SENSOR
CCH	CRANKCASE HEATER	OFM	OUTDOOR FAN MOTOR
CFS	CLOGGED FILTER SWITCH	PL	PLUG
COMP	COMPRESSOR	PL	RETURN AIR SENSOR
CT	CONTROL TRANSFORMER	RC	RUN CAPACITOR
DAT	DISCHARGE AIR SENSOR	RTU-C	ROOFTOP UNIT CONTROL
DISC	DISCONNECT SWITCH	TB	TERMINAL BLOCK
FP	FAN PROVING	⚠	WIRE NUT
FS	FREEZE SENSOR		
GFCO	GROUND FAULT CONVENIENCE OUTLET		
GL	GROUND LUG		
GND	GROUND		
HPC	HIGH PRESSURE CONTROL		
IBM	INDOOR BLOWER MOTOR BELT DRIVE		

WIRING INFORMATION

LINE VOLTAGE
 -FACTORY STANDARD
 -FACTORY OPTION
 -FIELD INSTALLED

LOW VOLTAGE
 -FACTORY STANDARD
 -FACTORY OPTION
 -FIELD INSTALLED

REPLACEMENT WIRE
 -MUST BE THE SAME SIZE AND TYPE OF INSULATION AS ORIGINAL (105°C MIN.)

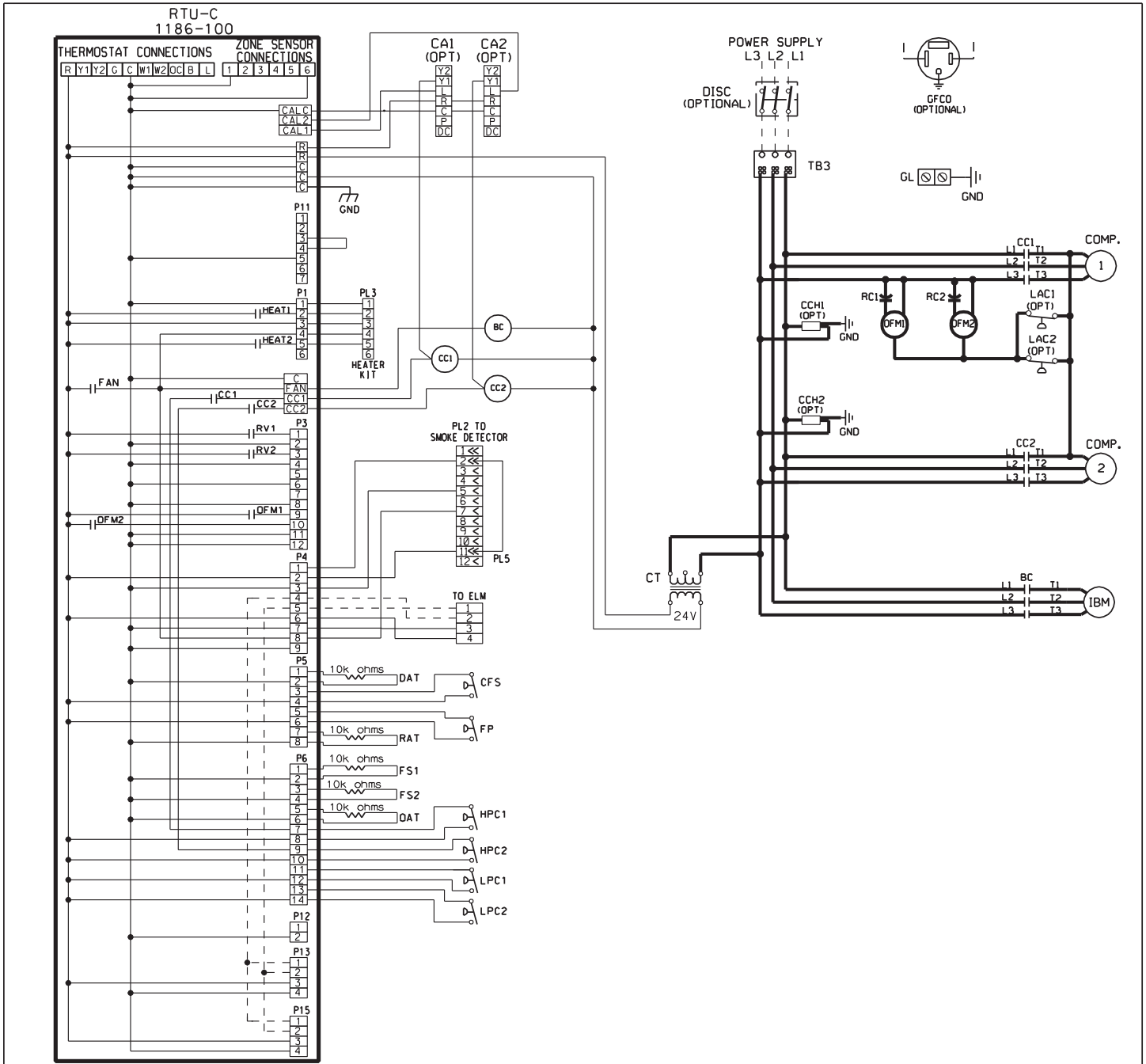
WARNING
 -CABINET MUST BE PERMANENTLY GROUNDED AND CONFORM TO I.E.C., N.E.C., C.E.C., AND LOCAL CODES AS APPLICABLE.

WIRE COLOR CODE

BK	BLACK	O	ORANGE
BR	BROWN	PR	PURPLE
BL	BLUE	R	RED
G	GREEN	W	WHITE
GY	GRAY	Y	YELLOW

WIRING DIAGRAM
 (-)L?L-C090/102/120/150/151
 208-230/460/575V 3 PH, 60 HZ.
 PACKAGED A/C W/RTU-C

DR. BY	APP. BY	DATE	DWG. NO.	REV
MGR		4-15-09	90-103089-03	04



COMPONENT CODE

BC	BLOWER CONTACTOR	IFC	INTEGRATED FURNACE CONTROL
CA	COMFORT ALERT MODULE	LAC	LOW AMBIENT COOLING CONTROL
CC	COMPRESSOR CONTACTOR	LC	LIMIT CONTROL
CCH	CRANKCASE HEATER	LPC	LOW PRESSURE CONTROL
CFS	CLOGGED FILTER SWITCH	MAS	MIX AIR SENSOR
COMP	COMPRESSOR	OAT	OUTSIDE AIR SENSOR
CT	CONTROL TRANSFORMER	OFM	OUTDOOR FAN MOTOR
DISC	DISCONNECT SWITCH	PL	PLUG
FP	FAN PROVING	RAT	RETURN AIR SENSOR
FS	FREEZE SENSOR	RC	RUN CAPACITOR
GFCO	GROUND FAULT CONVENIENCE OUTLET	SCC	SPACE COMFORT CONTROL
GL	GROUND LUG	SE	SPARK ELECTRODE
GND	GROUND	TB	TERMINAL BLOCK
HPC	HIGH PRESSURE CONTROL	W	WIRE NUT
IBM	INDOOR BLOWER MOTOR BELT DRIVE		

WIRING INFORMATION

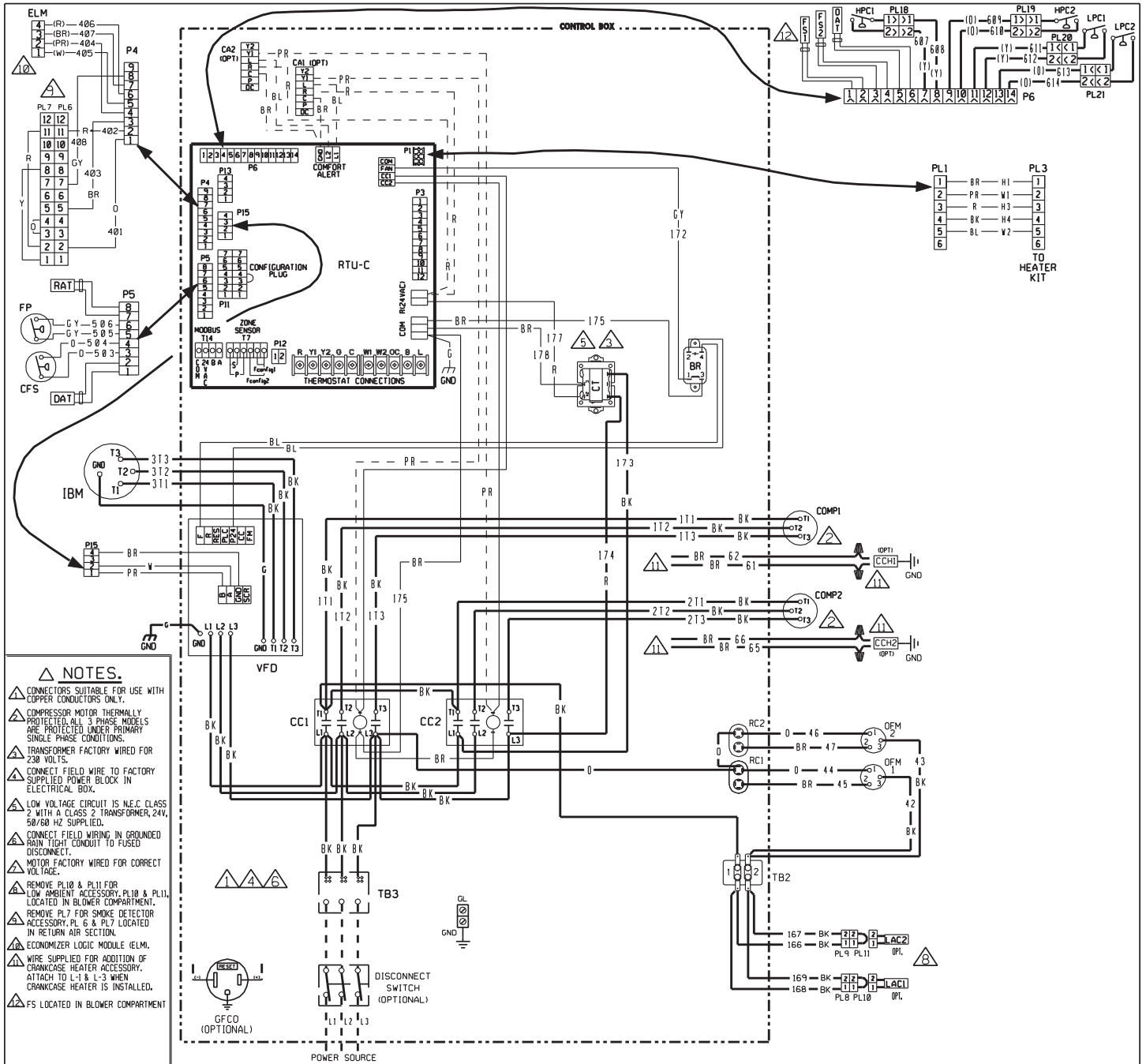
LINE VOLTAGE
 -FACTORY STANDARD —————
 -FACTORY OPTION - - - - -
 -FIELD INSTALLED - - - - -
 LOW VOLTAGE
 -FACTORY STANDARD —————
 -FACTORY OPTION - - - - -
 -FIELD INSTALLED - - - - -
 REPLACEMENT WIRE
 -MUST BE THE SAME SIZE AND TYPE OF INSULATION AS ORIGINAL (105° C MIN.)
 WARNING
 -CABINET MUST BE PERMANENTLY GROUNDED AND CONFORM TO I.E.C., N.E.C., C.E.C., AND LOCAL CODES AS APPLICABLE.

WIRE COLOR CODE

BK	BLACK	O	ORANGE
BR	BROWN	PR	PURPLE
BL	BLUE	R	RED
G	GREEN	W	WHITE
GY	GRAY	Y	YELLOW

WIRING SCHEMATIC
 (-)L?L-C090/102/120/150/151
 208-230/460/575V 3 PH, 60 HZ.
 PACKAGED A/C

DR. BY	APP. BY	DATE	DWG. NO.	REV
MGR		7-16-09	90-103246-03	01



- NOTES.**
- CONNECTORS SUITABLE FOR USE WITH COPPER CONDUCTORS ONLY.
 - COMPRESSOR MOTOR THERMALLY PROTECTED, ALL 3 PHASE MODELS ARE PROTECTED UNDER PRIMARY SINGLE PHASE CONDITIONS.
 - TRANSFORMER FACTORY WIRED FOR 230 VOLTS.
 - CONNECT FIELD WIRE TO FACTORY SUPPLIED POWER BLOCK IN ELECTRICAL BOX.
 - LOW VOLTAGE CIRCUIT IS N.E.C. CLASS 2 WITH A CLASS 2 TRANSFORMER, 24V, 50/60 HZ SUPPLIED.
 - CONNECT FIELD WIRING IN GROUNDED RAIN TIGHT CONDUIT TO FUSED DISCONNECT.
 - MOTOR FACTORY WIRED FOR CORRECT VOLTAGE.
 - REMOVE PL10 & PL11 FOR LOW AMBIENT ACCESSORY. PL10 & PL11, LOCATED IN BLOWER COMPARTMENT.
 - REMOVE PL7 FOR SMOKE DETECTOR ACCESSORY. PL6 & PL7 LOCATED IN RETURN AIR SECTION.
 - ECONOMIZER LOGIC MODULE (ELM).
 - WIRE SUPPLIED FOR ADDITION OF CRANKCASE HEATER ACCESSORY. ATTACH TO L-1 & L-3 WHEN CRANKCASE HEATER IS INSTALLED.
 - FS LOCATED IN BLOWER COMPARTMENT

COMPONENT CODE	
BR	BLOWER RELAY
CA	COMFORT ALERT MODULE
CC	COMPRESSOR CONTACTOR
CCH	CRANKCASE HEATER
CFS	CLOSED FILTER SWITCH
COMP	COMPRESSOR
CT	CONTROL TRANSFORMER
DAT	DISCHARGE AIR SENSOR
DISC	DISCONNECT SWITCH
FP	FAN PROVING
FS	FREEZE SENSOR
GFCD	GROUND FAULT CONVENIENCE OUTLET
GL	GROUND LUG
GND	GROUND
HPC	HIGH PRESSURE CONTROL
IBM	INDOOR BLOWER MOTOR BELT DRIVE
LAC	LOW AMBIENT COOLING CONTROL
LC	LIMIT CONTROL
LFC	LOW PRESSURE CONTROL
OAT	OUTSIDE AIR SENSOR
OFM	OUTDOOR FAN MOTOR
PL	PLUG
PL	RETURN AIR SENSOR
RAT	RUN CAPACITOR
RC	RC
RTU-C	ROOFTOP UNIT CONTROL
TB	TERMINAL BLOCK
VFD	VARIABLE FREQUENCY DRIVE
WIRE NUT	WIRE NUT

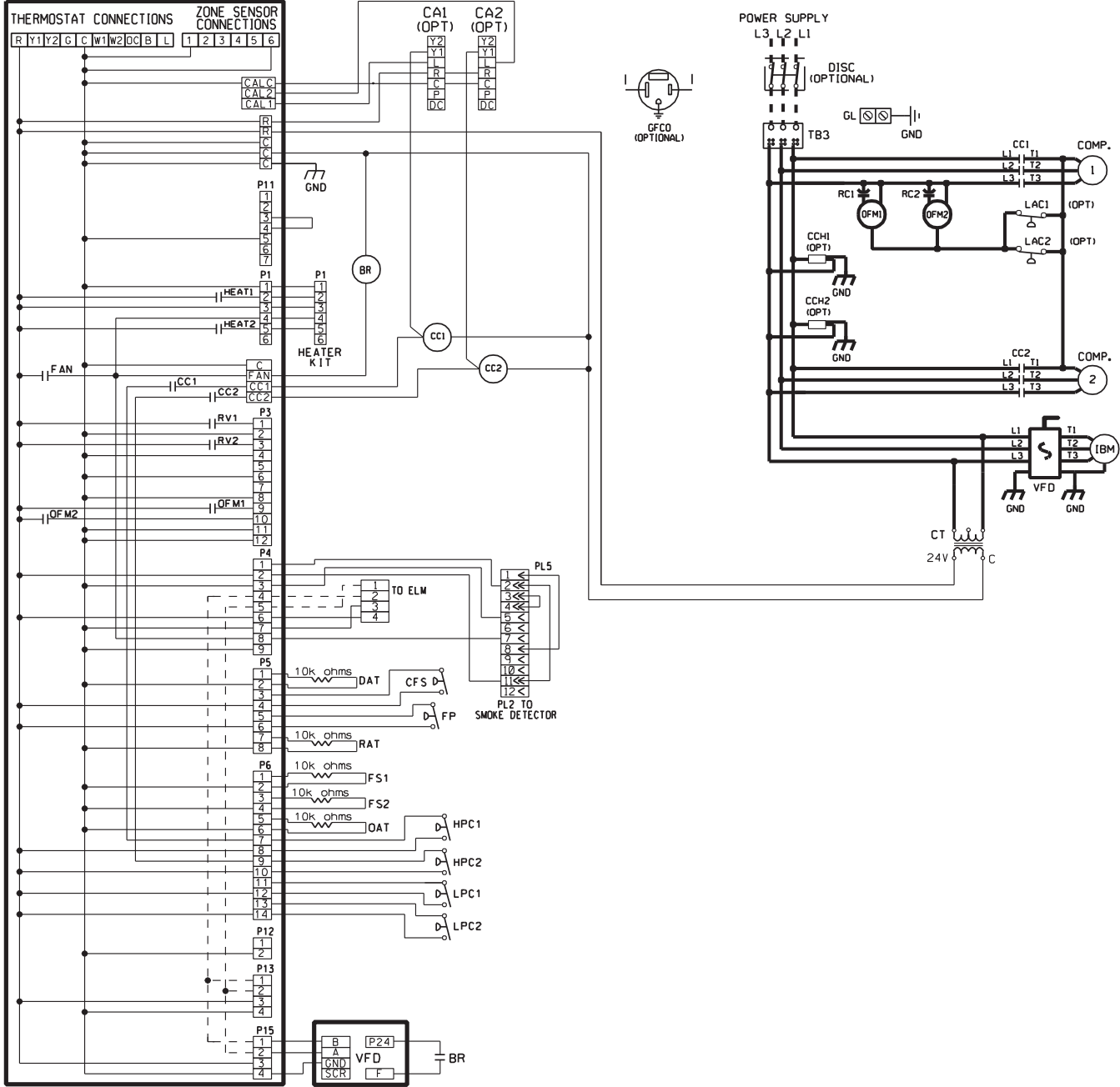
WIRING INFORMATION	
LINE VOLTAGE	-FACTORY STANDARD
	-FACTORY OPTION
	-FIELD INSTALLED
LOW VOLTAGE	-FACTORY STANDARD
	-FACTORY OPTION
	-FIELD INSTALLED
REPLACEMENT WIRE	-MUST BE THE SAME SIZE AND TYPE OF INSULATION AS ORIGINAL (105° C MIN.)
WARNING	-CABINET MUST BE PERMANENTLY GROUNDED AND CONFORM TO I.E.C., N.E.C., C.E.C., AND LOCAL CODES AS APPLICABLE.

WIRE COLOR CODE			
BK	BLACK	O	ORANGE
BR	BROWN	PR	PURPLE
BL	BLUE	R	RED
G	GREEN	W	WHITE
GY	GRAY	Y	YELLOW

WIRING DIAGRAM
090/102/120/151 W/VFD
208-230/460V 3 PH, 60 HZ.
PACKAGED A/C W/RTU-C

DR. BY	APP. BY	DATE	DWG. NO.	REV
JRJ		01-12-12	90-103089-32	00

RTU-C 1186-100



COMPONENT CODE

BR	BLOWER RELAY	HPC	HIGH PRESSURE CONTROL
CA	COMFORT ALERT MODULE	IBM	INDOOR BLOWER MOTOR BELT DRIVE
CC	COMPRESSOR CONTACTOR	LAC	LOW AMBIENT COOLING CONTROL
CCH	CRANKCASE HEATER	LC	LIMIT CONTROL
CFS	CLOGGED FILTER SWITCH	LPC	LOW PRESSURE CONTROL
COMP	COMPRESSOR	OAT	OUTSIDE AIR SENSOR
CT	CONTROL TRANSFORMER	OFM	OUTDOOR FAN MOTOR
DAT	DISCHARGE AIR SENSOR	PL	PLUG
DISC	DISCONNECT SWITCH	RAT	RETURN AIR SENSOR
FP	FAN PROVING	RC	RUN CAPACITOR
FS	FREEZE SENSOR	RTU-C	ROOFTOP UNIT CONTROL
GFCO	GROUND FAULT CONVENIENCE OUTLET	TB	TERMINAL BLOCK
GL	GROUND LUG	VFD	VARIABLE FREQUENCY DRIVE
GND	GROUND	W	WIRE NUT

WIRING INFORMATION

LINE VOLTAGE
 -FACTORY STANDARD
 -FACTORY OPTION
 -FIELD INSTALLED

LOW VOLTAGE
 -FACTORY STANDARD
 -FACTORY OPTION
 -FIELD INSTALLED

REPLACEMENT WIRE
 -MUST BE THE SAME SIZE AND TYPE OF INSULATION AS ORIGINAL (105° C MIN.)

WARNING
 -CABINET MUST BE PERMANENTLY GROUNDED AND CONFORM TO I.E.C., N.E.C., C.E.C., AND LOCAL CODES AS APPLICABLE.

WIRE COLOR CODE

BK	BLACK	O	ORANGE
BR	BROWN	PR	PURPLE
BL	BLUE	R	RED
G	GREEN	W	WHITE
GY	GRAY	Y	YELLOW

WIRING SCHEMATIC
 090/102/120/151 W/VFD
 208-230/460V 3 PH, 60 HZ.
 PACKAGED A/C

DR. BY	APP. BY	DATE	DWG. NO.	REV
JRJ		01-12-12	90-103246-28	01

XXII. CHARGING CHARTS

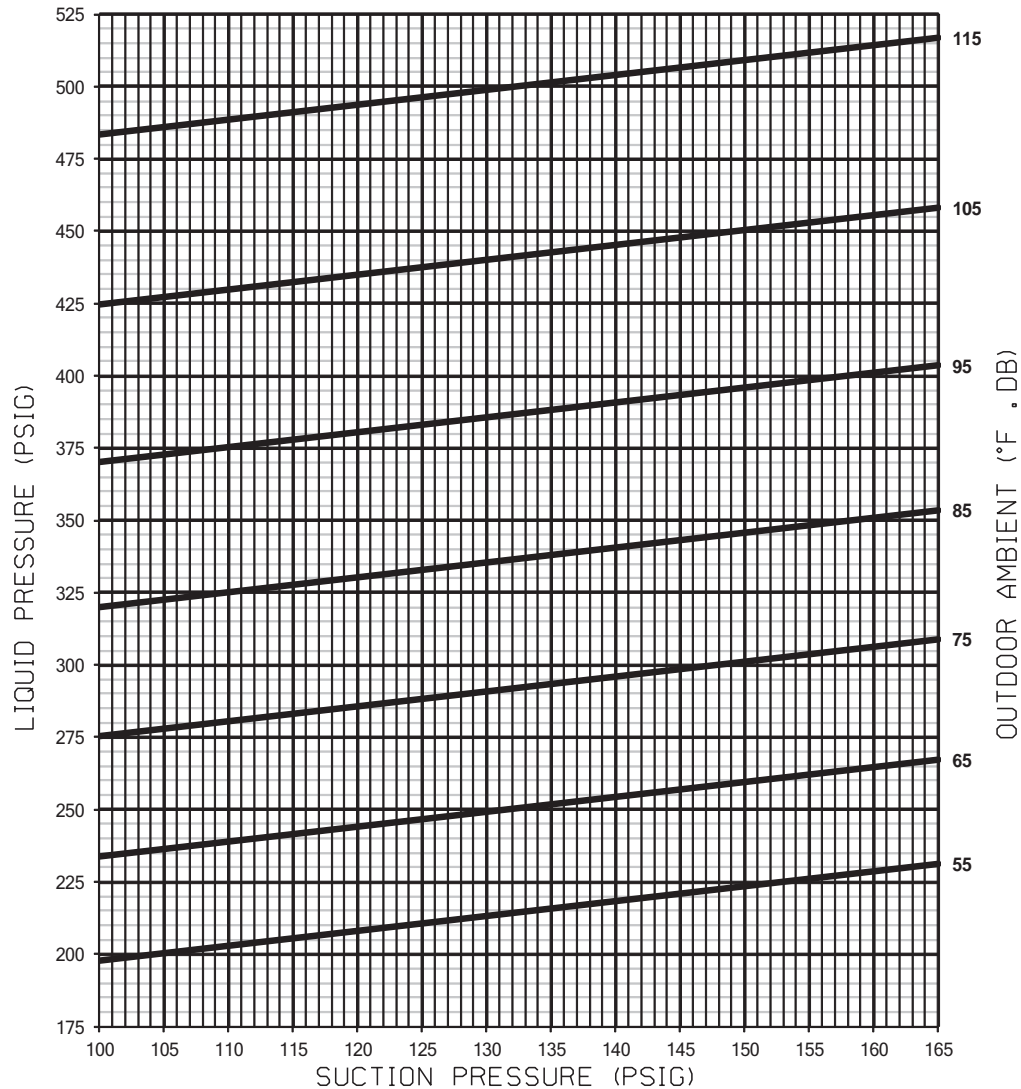
RLNL SYSTEM CHARGE CHARTS

FIGURE 16

SYSTEM CHARGE CHART - REFRIGERANT 410A 6 TON, CIRCUIT 1

CAUTION: 1. RETURN AIR TEMPERATURE MUST BE WITHIN COMFORT CONDITIONS BEFORE FINAL REFRIGERANT CHECK!

- INSTRUCTIONS:**
1. MEASURE PRESSURE AT COMPRESSOR SUCTION AND LIQUID.
 2. MEASURE OUTDOOR AMBIENT TO UNIT.
 3. PLACE (X) ON CHART WHERE SUCTION AND LIQUID INTERSECT.
 4. IF (X) IS BELOW OUTDOOR AMBIENT LINE, ADD CHARGE AND REPEAT STEPS 1-3.
 5. IF (X) IS ABOVE OUTDOOR AMBIENT LINE, RECOVER EXCESS CHARGE AND REPEAT STEPS 1-3.



RLNL SYSTEM CHARGE CHARTS

FIGURE 17

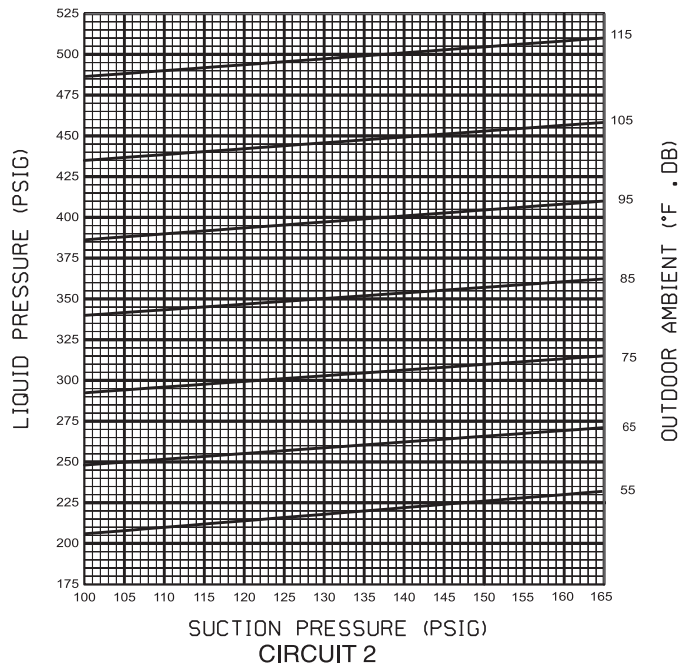
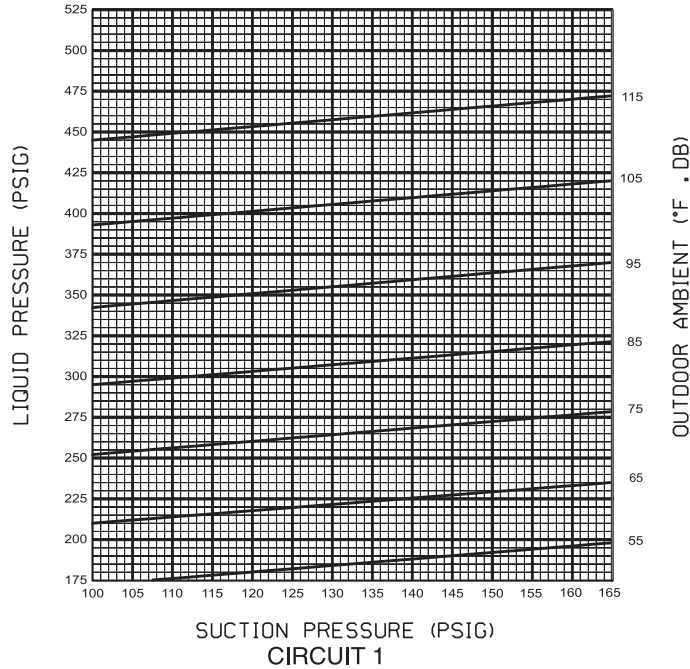
SYSTEM CHARGE CHART - REFRIGERANT 410A 7-1/2 TON, CIRCUITS 1 & 2

CAUTION:

1. BOTH COMPRESSORS MUST BE OPERATING BEFORE CHECKING REFRIGERANT CHARGE.

INSTRUCTIONS:

2. RETURN AIR TEMPERATURE MUST BE WITHIN COMFORT CONDITIONS BEFORE FINAL REFRIGERANT CHECK!
1. MEASURE PRESSURE AT COMPRESSOR SUCTION AND LIQUID.
2. MEASURE OUTDOOR AMBIENT TO UNIT.
3. PLACE (X) ON CHART WHERE SUCTION AND LIQUID INTERSECT.
4. IF (X) IS BELOW OUTDOOR AMBIENT LINE, ADD CHARGE AND REPEAT STEPS 1-3.
5. IF (X) IS ABOVE OUTDOOR AMBIENT LINE, RECOVER EXCESS CHARGE AND REPEAT STEPS 1-3.



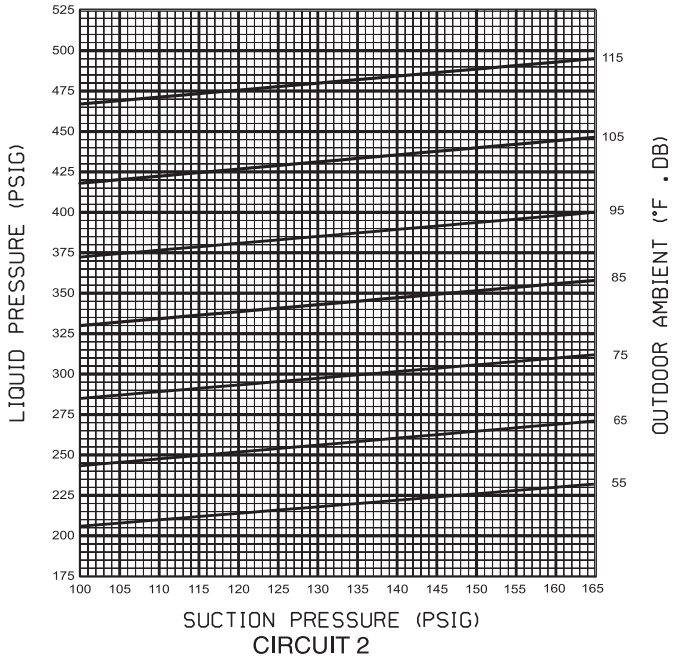
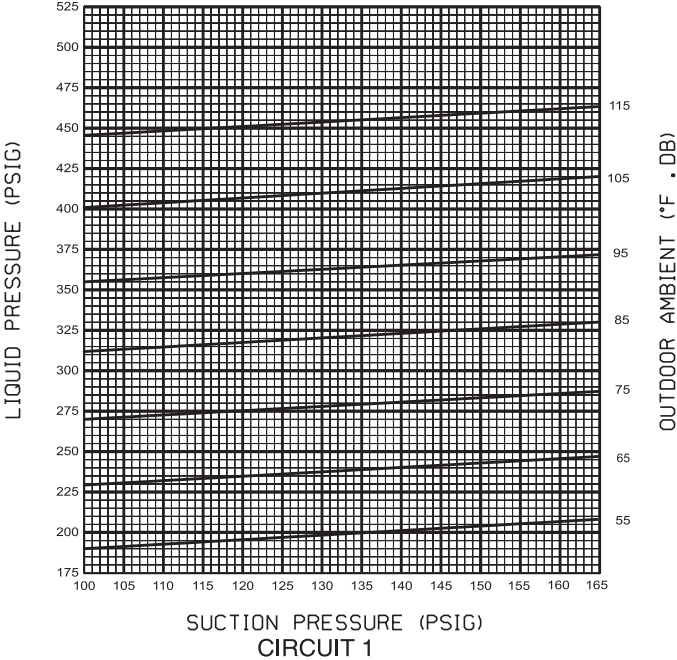
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RLNL SYSTEM CHARGE CHARTS

FIGURE 18

SYSTEM CHARGE CHART - REFRIGERANT 410A 8-1/2 TON, CIRCUITS 1 & 2

- CAUTION:**
- BOTH COMPRESSORS MUST BE OPERATING BEFORE CHECKING REFRIGERANT CHARGE.
 - RETURN AIR TEMPERATURE MUST BE WITHIN COMFORT CONDITIONS BEFORE FINAL REFRIGERANT CHECK!
- INSTRUCTIONS:**
- MEASURE PRESSURE AT COMPRESSOR SUCTION AND LIQUID.
 - MEASURE OUTDOOR AMBIENT TO UNIT.
 - PLACE (X) ON CHART WHERE SUCTION AND LIQUID INTERSECT.
 - IF (X) IS BELOW OUTDOOR AMBIENT LINE, ADD CHARGE AND REPEAT STEPS 1-3.
 - IF (X) IS ABOVE OUTDOOR AMBIENT LINE, RECOVER EXCESS CHARGE AND REPEAT STEPS 1-3.



RLNL SYSTEM CHARGE CHARTS

FIGURE 19

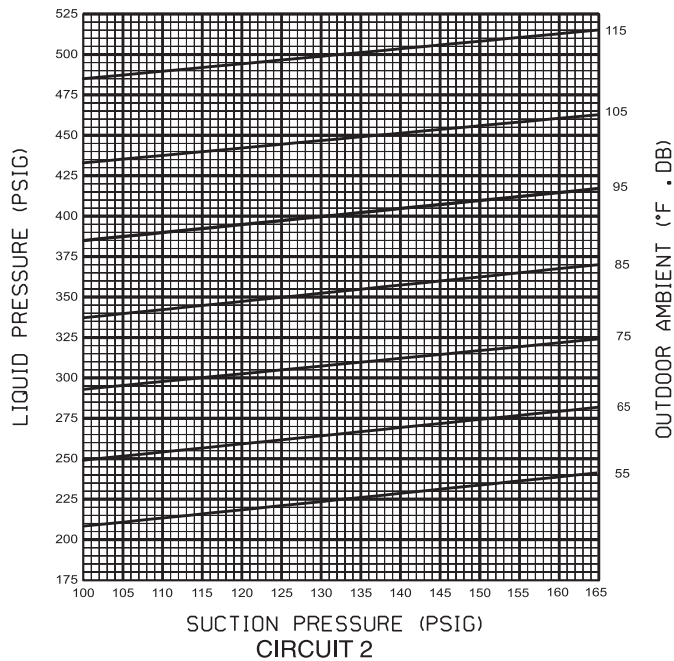
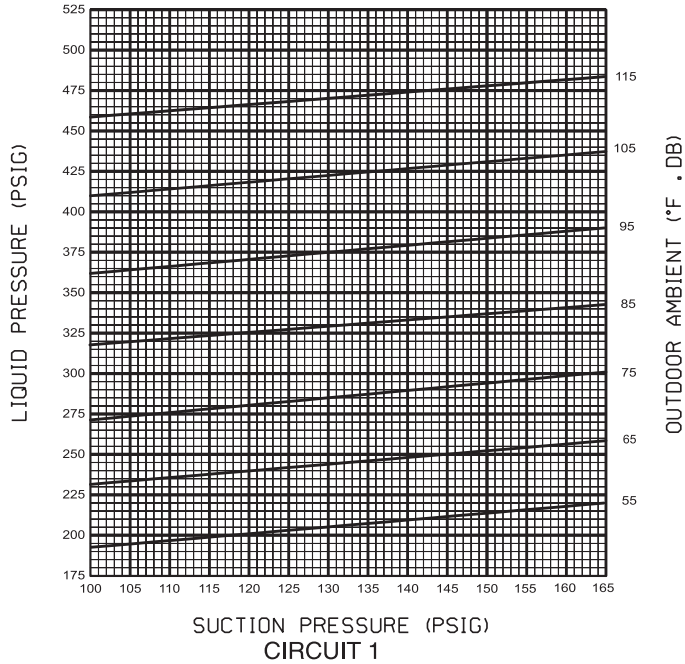
SYSTEM CHARGE CHART - REFRIGERANT 410A 10 TON, CIRCUITS 1 & 2

CAUTION:

1. BOTH COMPRESSORS MUST BE OPERATING BEFORE CHECKING REFRIGERANT CHARGE.
2. RETURN AIR TEMPERATURE MUST BE WITHIN COMFORT CONDITIONS BEFORE FINAL REFRIGERANT CHECK!

INSTRUCTIONS:

1. MEASURE PRESSURE AT COMPRESSOR SUCTION AND LIQUID.
2. MEASURE OUTDOOR AMBIENT TO UNIT.
3. PLACE (X) ON CHART WHERE SUCTION AND LIQUID INTERSECT.
4. IF (X) IS BELOW OUTDOOR AMBIENT LINE, ADD CHARGE AND REPEAT STEPS 1-3.
5. IF (X) IS ABOVE OUTDOOR AMBIENT LINE, RECOVER EXCESS CHARGE AND REPEAT STEPS 1-3.



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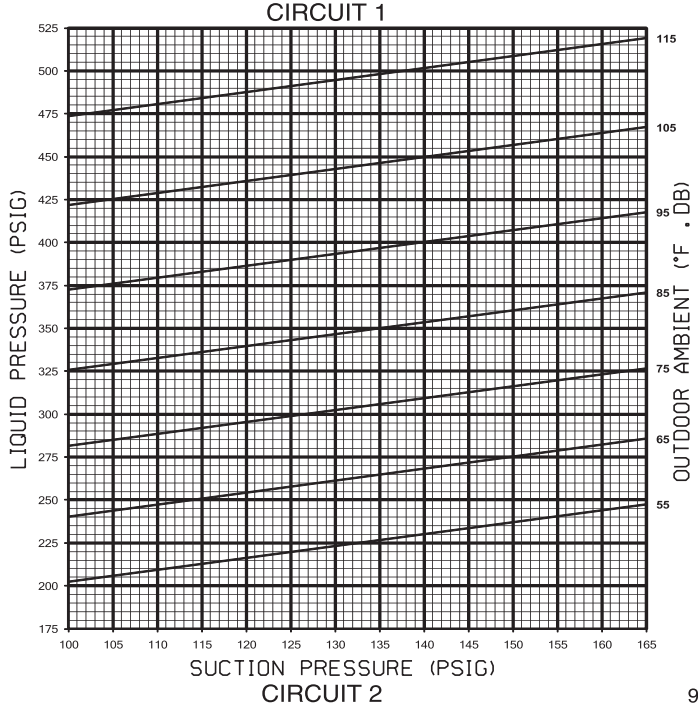
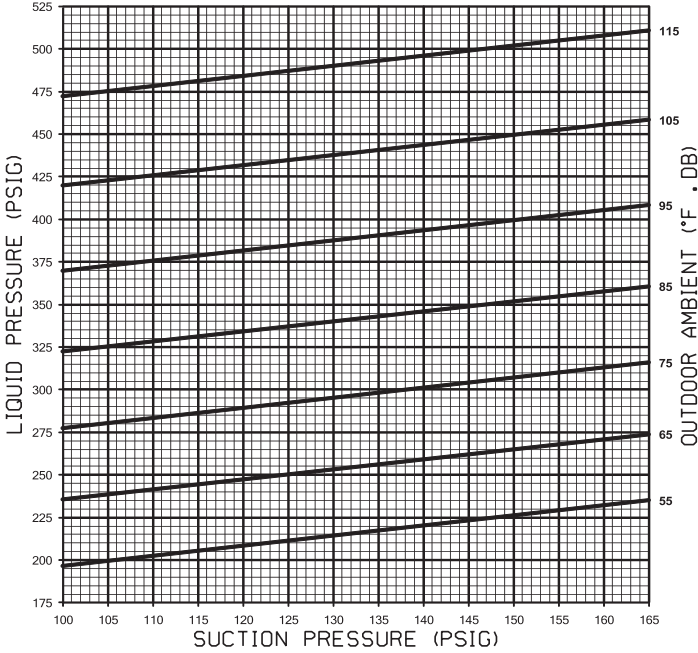
RLNL SYSTEM CHARGE CHARTS

FIGURE 20

SYSTEM CHARGE CHART - REFRIGERANT 410A 12-1/2 TON, CIRCUITS 1 & 2

- CAUTION:**
- BOTH COMPRESSORS MUST BE OPERATING BEFORE CHECKING REFRIGERANT CHARGE.
 - RETURN AIR TEMPERATURE MUST BE WITHIN COMFORT CONDITIONS BEFORE FINAL REFRIGERANT CHECK!

- INSTRUCTIONS:**
- MEASURE PRESSURE AT COMPRESSOR SUCTION AND LIQUID.
 - MEASURE OUTDOOR AMBIENT TO UNIT.
 - PLACE (X) ON CHART WHERE SUCTION AND LIQUID INTERSECT.
 - IF (X) IS BELOW OUTDOOR AMBIENT LINE, ADD CHARGE AND REPEAT STEPS 1-3.
 - IF (X) IS ABOVE OUTDOOR AMBIENT LINE, RECOVER EXCESS CHARGE AND REPEAT STEPS 1-3.



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