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



c UL us LISTED

AHRI CERTIFIED™ www.ahridirectory.org
Unitary Large AC
AHRI Standard 340/360
Certification applies only when the complete system is listed with AHRI.

Accredited by the RvA
ABS Quality Evaluations, Inc. Management System Certification
ANAB ACCREDITED
ISO 9001:2008
Certificate Number: 30164

⚠ 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

92-23577-82-05
SUPERSEDES 92-23577-82-04

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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

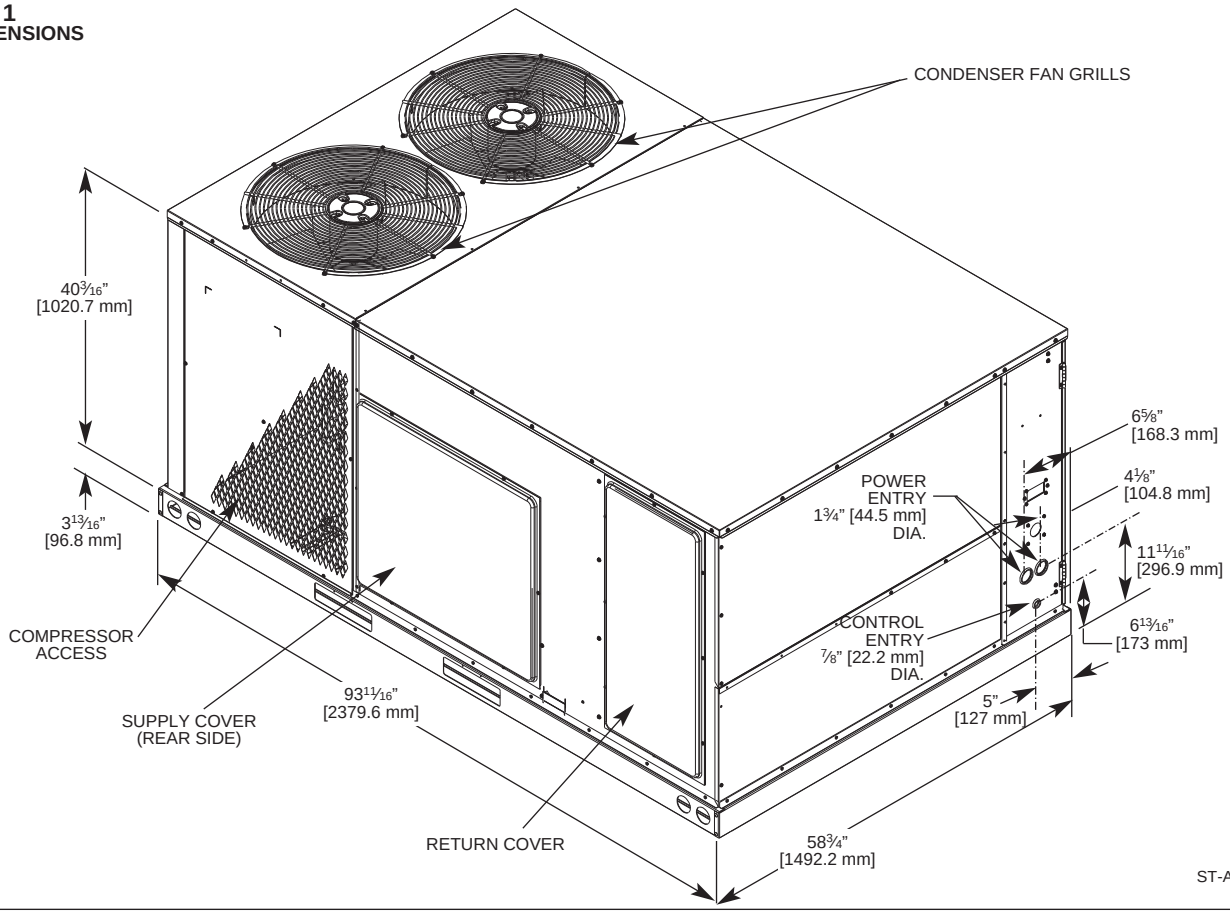
Manifold Hoses:
- -Service Pressure Rating of 800 PSIG

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

⚠ CAUTION

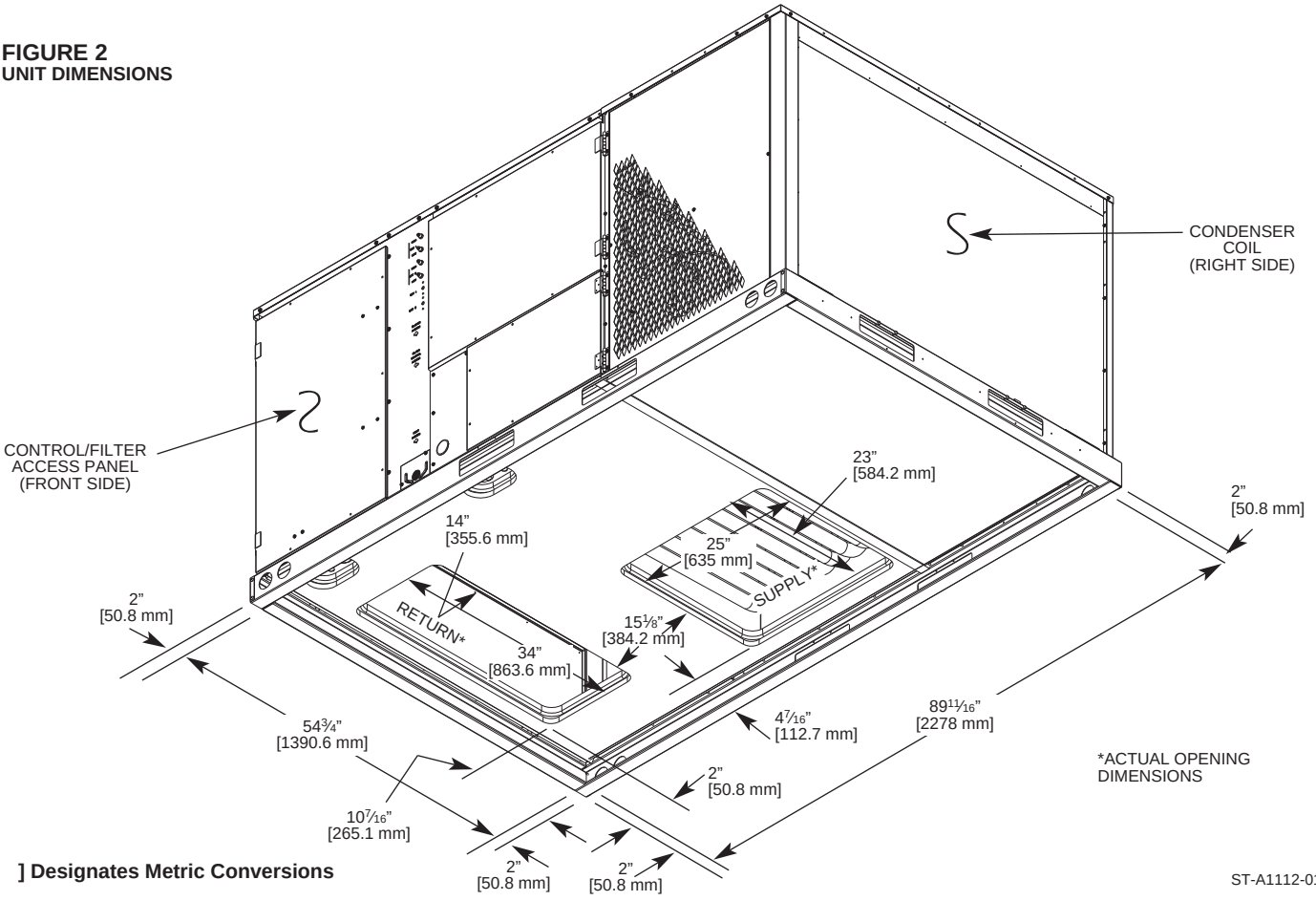
R-410A systems operate at higher pressures than R-22 systems. Do not use R-22 service equipment or components on R-410A equipment.

FIGURE 1
UNIT DIMENSIONS



ST-A1112-02-00

FIGURE 2
UNIT DIMENSIONS



[ ] Designates Metric Conversions

ST-A1112-01-00

FIGURE 3
UNIT DIMENSIONS

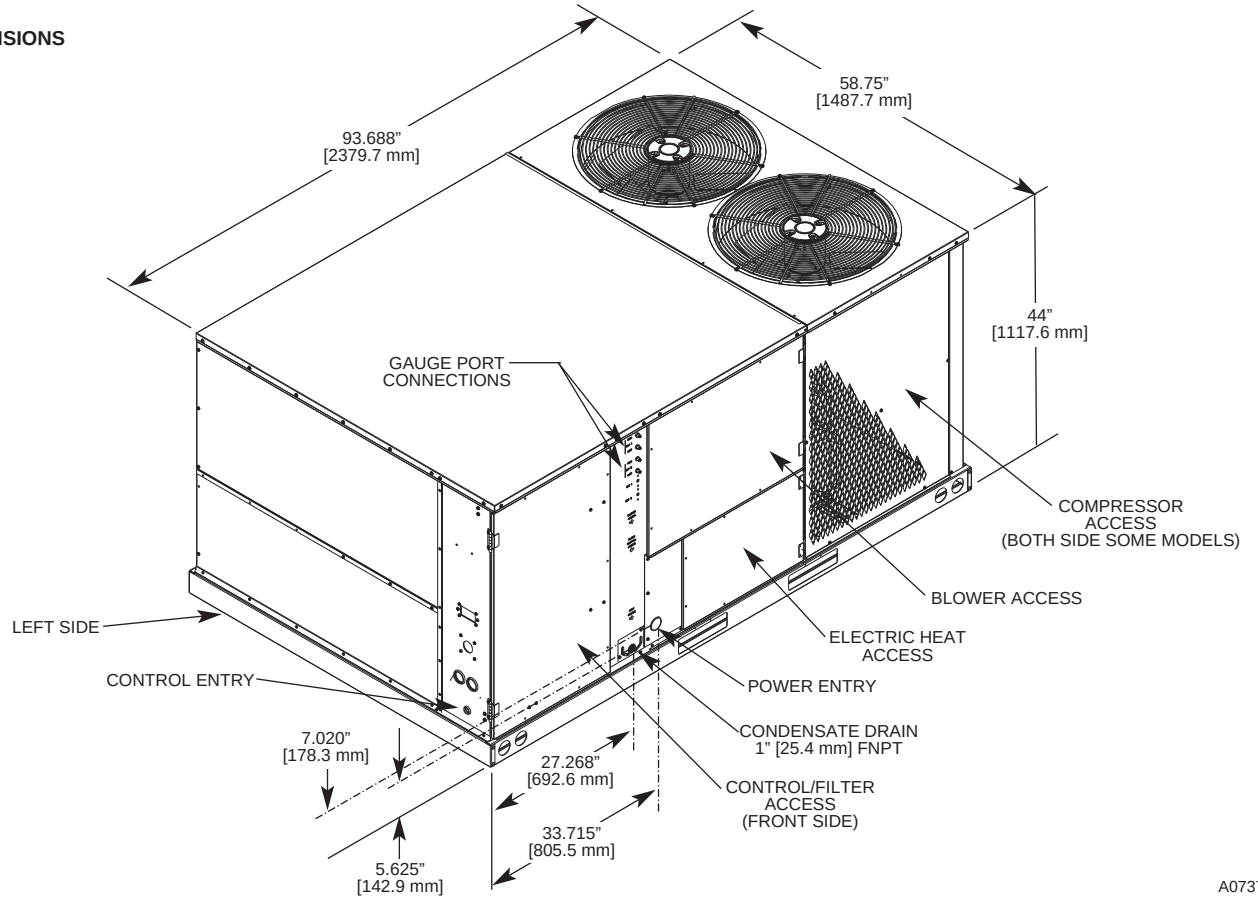


FIGURE 4
BOTTOM VIEW

SUPPLY RETURN DIMENSIONS FOR DOWNFLOW APPLICATIONS

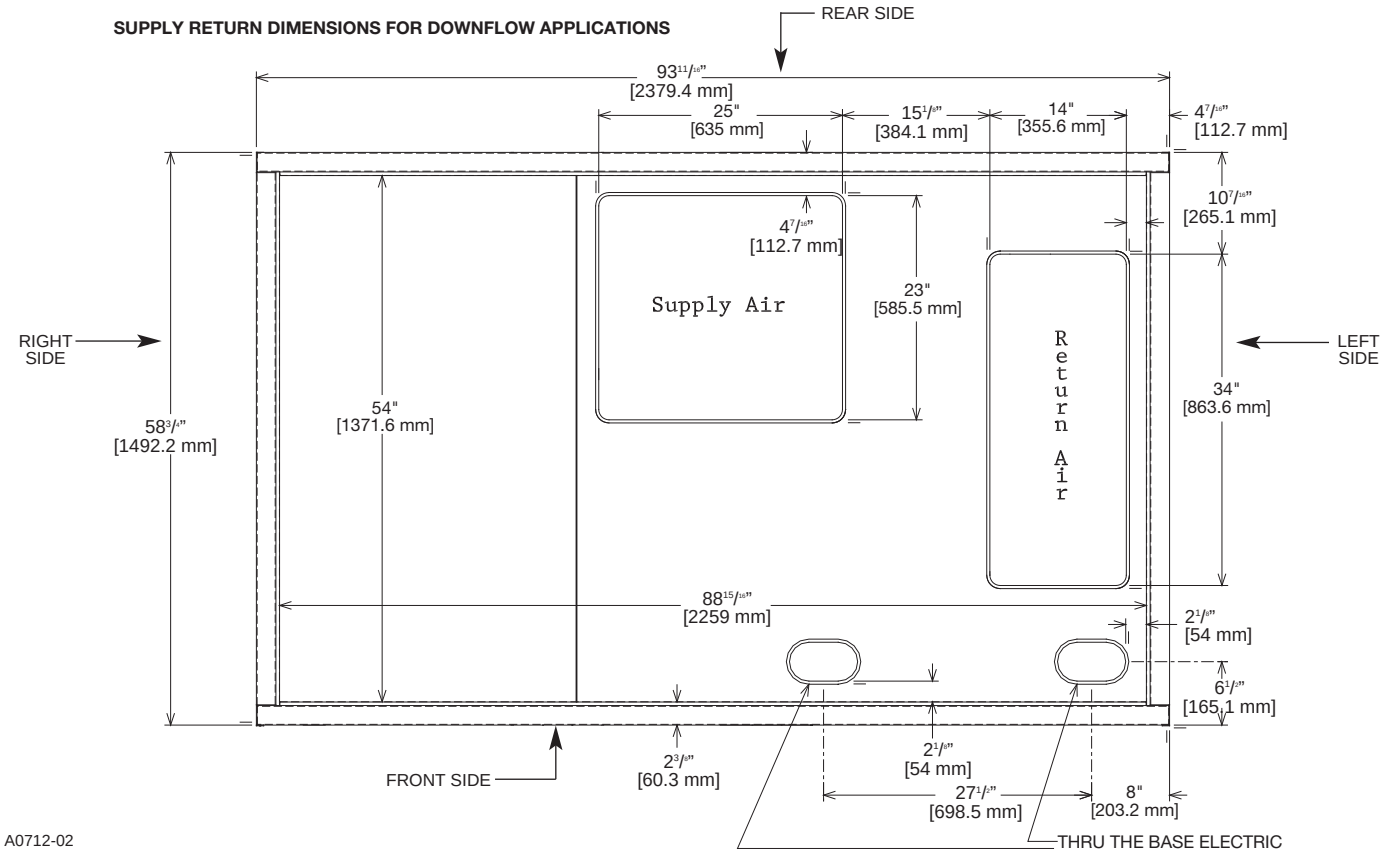
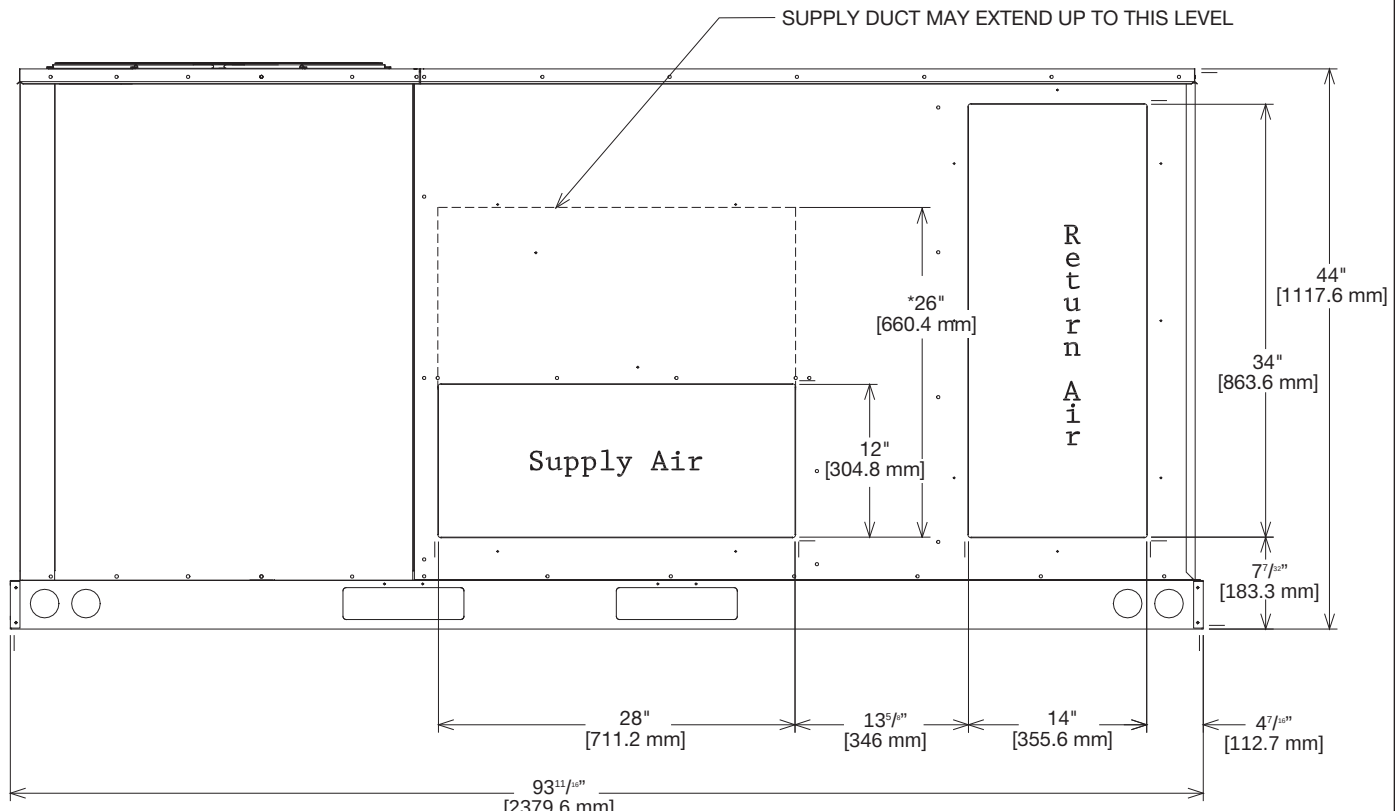


FIGURE 5
REAR VIEW

SUPPLY AND RETURN DIMENSIONS FOR HORIZONTAL APPLICATION



***RECOMMENDED DUCT DIMENSIONS ARE 26"**

A0714-03

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 Performance[1]				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 Performance[1]				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 Performance[1]				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 Performance[1]				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 Performance[1]				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 Performance[1]				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 Performance[1]				**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 Performance[1]				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 6-12½ TONS [21.1-43.9 kW]

Model RLNL-Series **Model RLNL-Series (with VFD)**	**(B,C)151YM**
Cooling Performance[1]	
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	Louvered
Tube Type	MicroChannel
MicroChannel Depth in. [mm]	1 [25.4]
Face Area sq. ft. [sq. m]	27 [2.51]
Rows / FPI [FPcm]	2 / 23 [9]
Indoor Coil—Fin Type	Louvered
Tube Type	Rifled
Tube Size in. [mm]	0.375 [9.5]
Face Area sq. ft. [sq. m]	13.5 [1.25]
Rows / FPI [FPcm]	4 / 15 [6]
Refrigerant Control	TX Valves
Drain Connection No./Size in. [mm]	1/1 [25.4]
Outdoor Fan—Type	Propeller
No. Used/Diameter in. [mm]	2/24 [609.6]
Drive Type/No. Speeds	Direct/1
CFM [L/s]	8000 [3775]
No. Motors/HP	2 at 1/2 HP
Motor RPM	1075
Indoor Fan—Type	FC Centrifugal
No. Used/Diameter in. [mm]	1/15x15 [381x381]
Drive Type	Belt (Adjustable)
No. Speeds	Single
No. Motors	1
Motor HP	5
Motor RPM	1725
Motor Frame Size	184
Filter—Type	Disposable
Furnished	Yes
(No.) Size Recommended in. [mm x mm x mm]	(6)2x18x18 [51x457x457]
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:

a. Structural strength of supporting members. (rooftop installation)

b. Clearances and provision for servicing.

c. Power supply and wiring.

d. Air duct connections.

e. Drain facilities and connections.

f. 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.)

1. Select a location where external water drainage cannot collect around the unit.

2. 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.*

3. The location of the unit should be such as to provide proper access for inspection and servicing.

4. Locate unit where operating sounds will not disturb owner or neighbors.

5. 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.

1. 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.

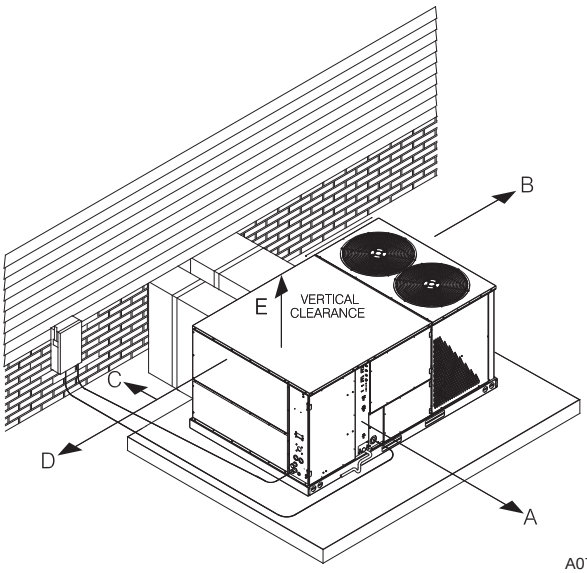
2. Provide 60" [1524 mm] minimum clearance between top of unit and maximum 3 foot [.91 m] overhang.

3. Unit is design certified for application on combustible flooring with 0" [0 mm] minimum clearance.

4. See Figure 6 for illustration of minimum installation-service clearances.

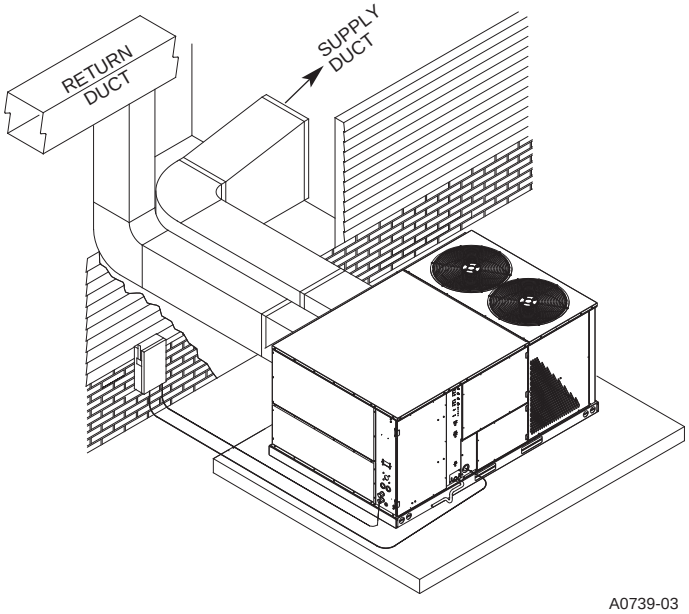
FIGURE 6
OUTSIDE SLAB INSTALLATION, BASEMENT OR CRAWL SPACE DISTRIBUTION SYSTEM

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

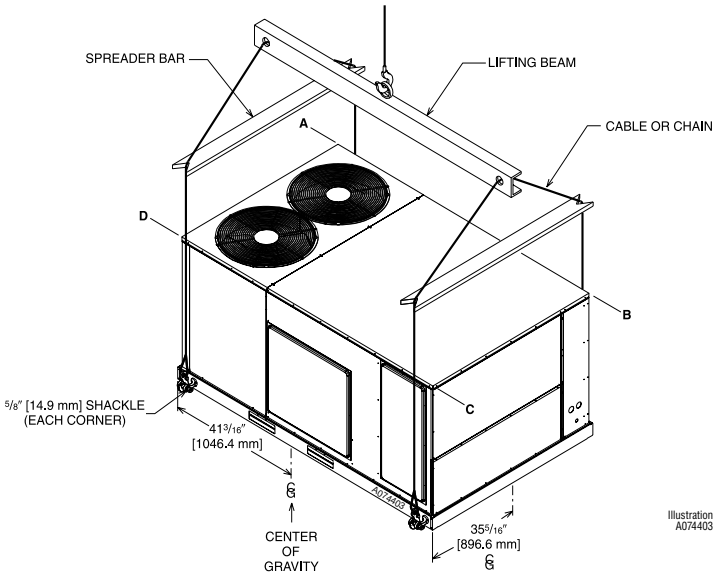
D. ROOFTOP INSTALLATION

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.*

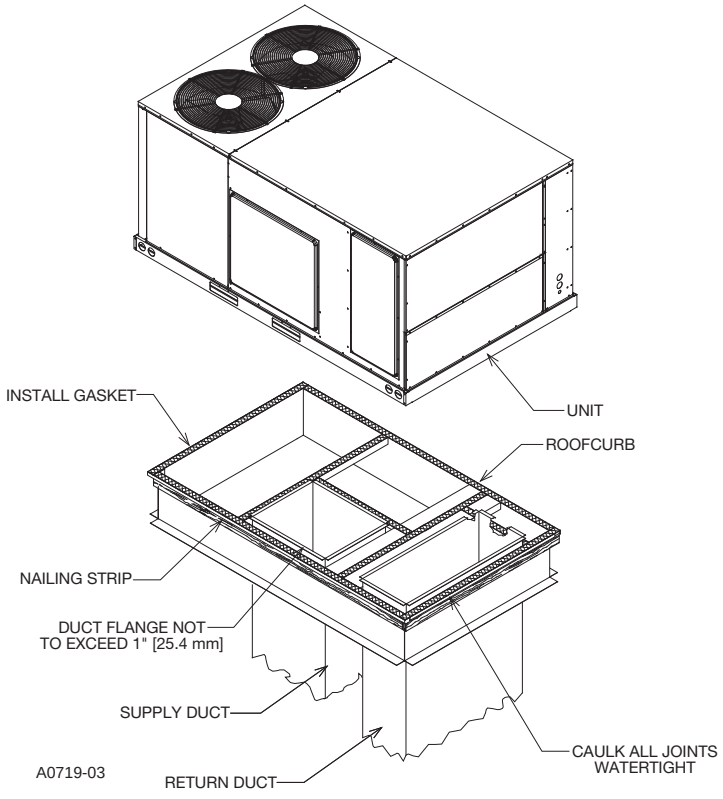
FIGURE 8
RIGGING FOR LIFTING

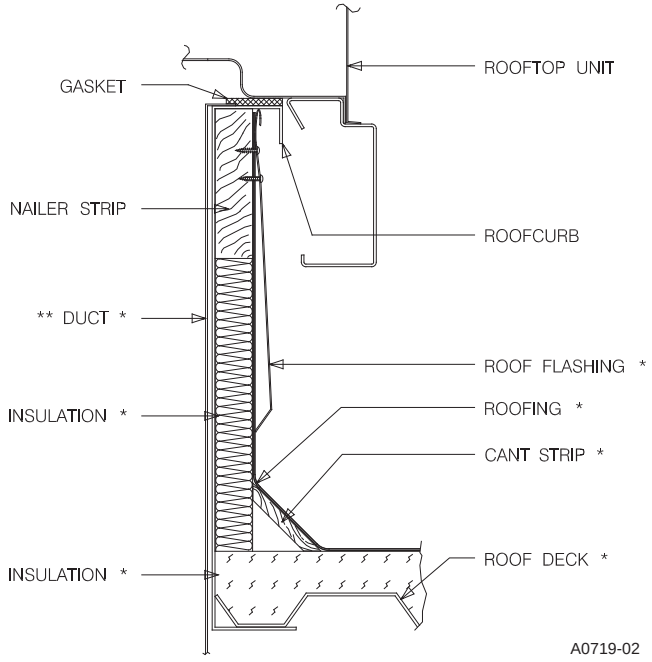
CORNER WEIGHTS BY PERCENTAGE			
A	B	C	D
33%	27%	17%	23%



A0744-03

FIGURE 9
ROOFCURB INSTALLATION

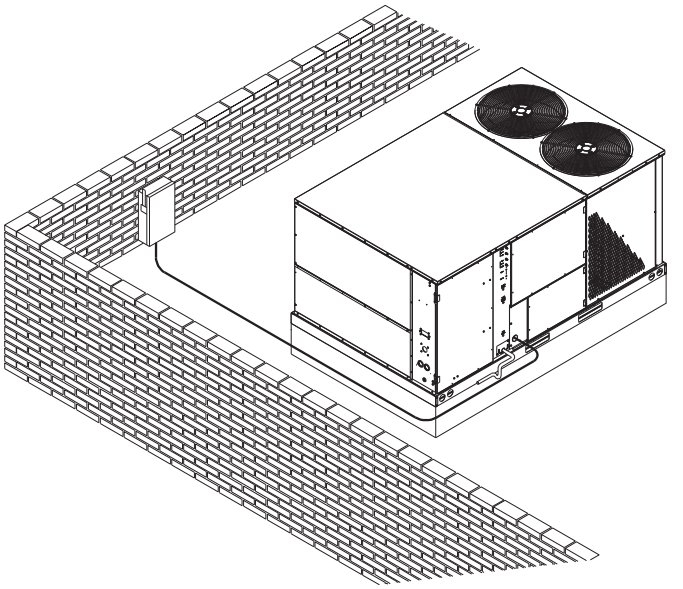




* BY CONTRACTOR

** 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

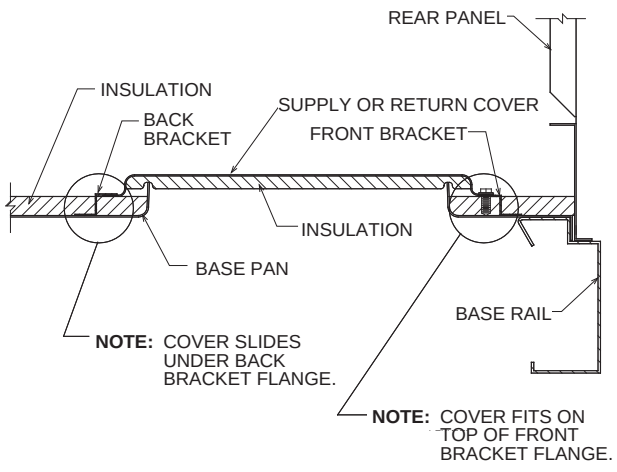
This unit is provided with 6 - 2" x 18" x 18" [51mm x 457 mm x 457 mm] disposable filters. When replacing filters, ensure they are inserted fully to the back to prevent bypass.

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



A0725-01

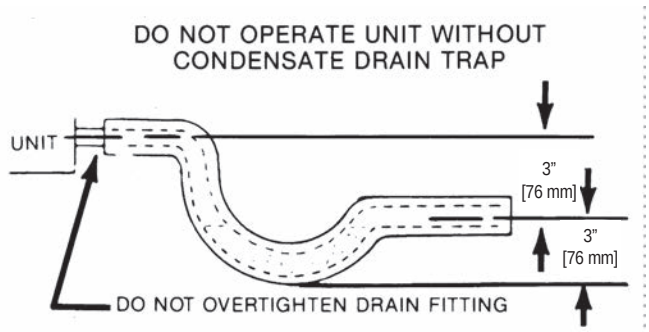
X. CONDENSATE DRAIN

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 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

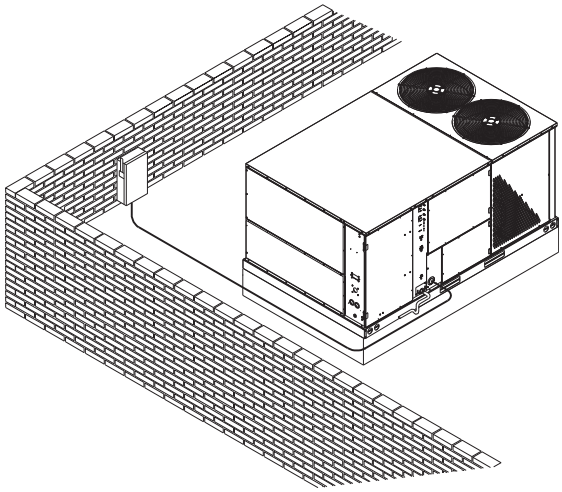
Field wiring must comply with the National Electrical Code (CEC in Canada) and local ordinances that may apply.

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



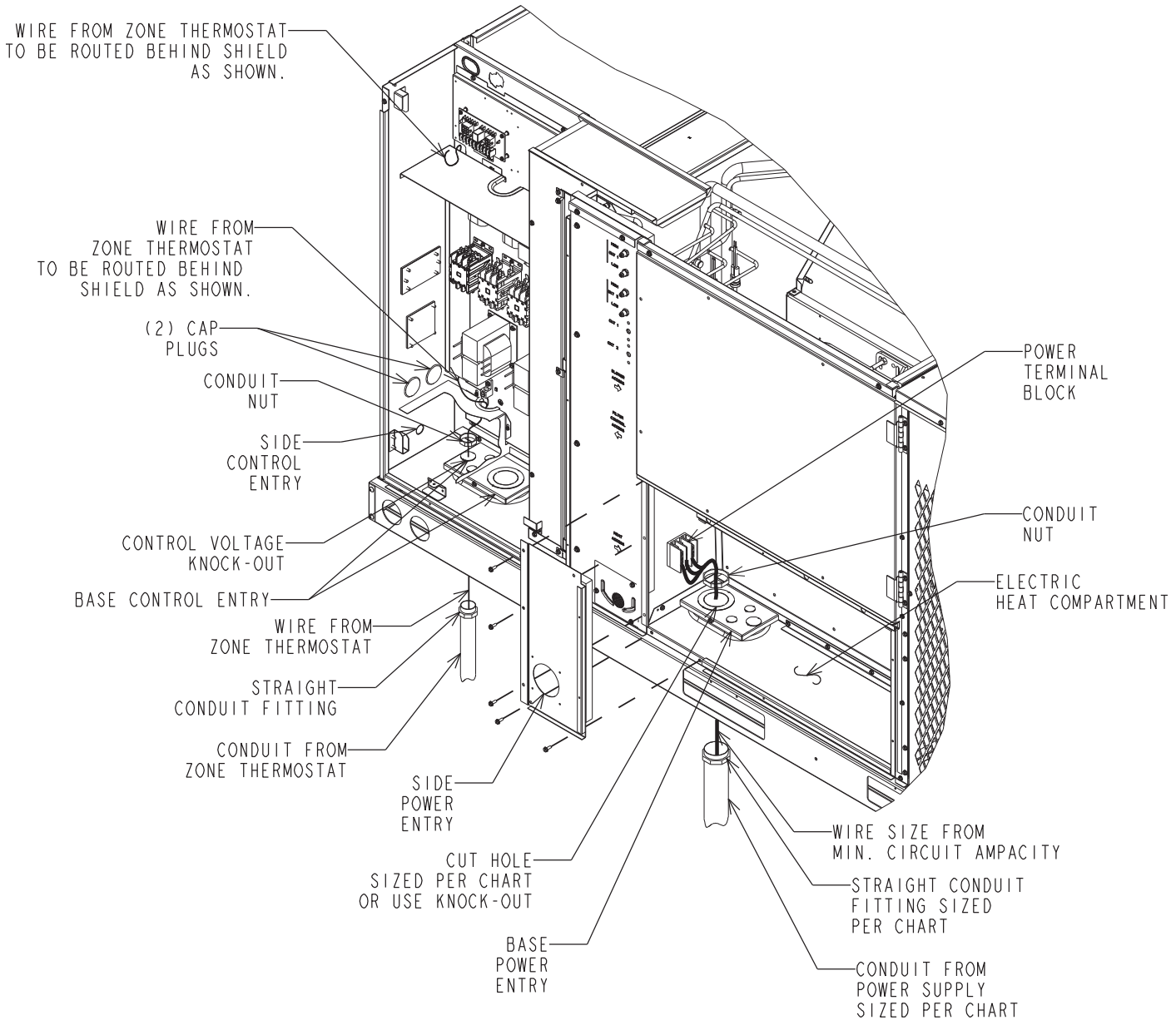
   UNITS WITH FACTORY INSTALLED ELECTRIC HEAT - Connect power wiring to the power terminal block located on the electric heater kit. Connect the ground wire to the adjacent ground lug. DO NOT connect aluminum wiring directly to the electric heater terminal block. Wiring to the unit contactors is factory-connected.

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

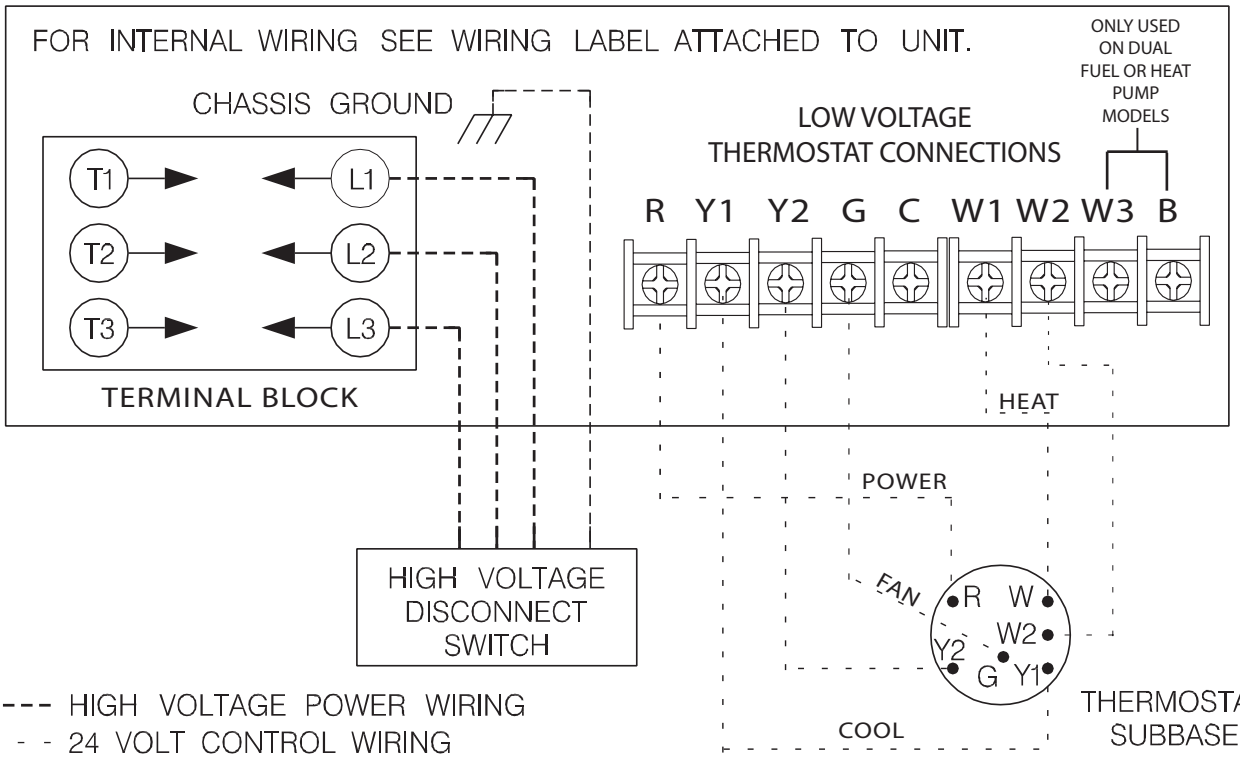
Belt-drive blower models have motor sheaves set for proper CFM at a typical external static. See Tables C through G for blower performance.

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



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.

XIX. AIRFLOW DATA TABLES

AIR-FLOW PERFORMANCE – 6 TON RLNL-B073/C073 MODELS

Air Flow CFM [L/s]	Capacity 6 Ton [21.1 kW]																											
	Voltage 208/230, 460, 575 — 3 phase																											
	External Static Pressure — Inches of Water [kPa]																											
	0.1 [.02]		0.2 [.05]		0.3 [.07]		0.4 [.10]		0.5 [.12]		0.6 [.15]		0.7 [.17]		0.8 [.20]		0.9 [.22]		1.0 [.25]		1.1 [.27]		1.2 [.30]		1.3 [.32]		1.4 [.35]		1.5 [.37]	
	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W
1800 [849]	—	—	—	—	—	—	—	—	835	631	880	686	924	740	965	794	1005	847	1043	898	1079	949	1113	999	1146	1048	1177	1096	1206	1144
1900 [897]	—	—	—	—	—	—	808	622	854	681	899	739	941	795	982	851	1021	906	1058	960	1093	1013	1127	1065	1159	1117	1189	1167	1217	1217
2000 [944]	—	—	—	—	—	—	828	673	874	734	918	794	959	853	999	911	1037	968	1074	1025	1108	1080	1141	1135	1172	1189	1201	1242	1228	1293
2100 [991]	—	—	—	—	803	663	850	727	894	790	937	853	978	914	1017	974	1055	1034	1090	1093	1124	1151	1156	1208	1186	1264	1214	1319	1241	1373
2200 [1038]	—	—	—	—	826	718	871	784	915	850	957	914	997	978	1036	1041	1072	1103	1107	1164	1140	1224	1171	1283	1201	1342	1228	1399	1254	1456
2300 [1085]	—	—	802	706	849	775	894	844	937	912	978	979	1017	1045	1055	1110	1091	1174	1125	1238	1157	1300	1187	1362	1216	1423	1242	1482	1267	1541
2400 [1133]	—	—	826	764	872	836	916	907	959	977	999	1047	1038	1115	1075	1183	1110	1249	1143	1315	1174	1380	1204	1444	1231	1507	1257	1569	1282	1630
2500 [1180]	805	751	852	826	897	900	940	973	981	1046	1021	1118	1059	1188	1095	1258	1129	1327	1162	1395	1192	1462	1221	1529	1248	1594	1273	1658	—	—
2600 [1227]	831	813	877	890	922	967	964	1043	1005	1118	1044	1191	1081	1265	1116	1337	1149	1408	1181	1478	1211	1548	1239	1616	1265	1684	—	—	—	—
2700 [1274]	858	878	904	958	947	1037	989	1115	1029	1192	1067	1268	1103	1344	1137	1418	1170	1492	1201	1565	1230	1637	1257	1708	1282	1778	—	—	—	—
2800 [1321]	886	947	931	1029	973	1110	1014	1190	1053	1270	1091	1349	1126	1426	1160	1503	1191	1579	1221	1654	1250	1728	1276	1802	—	—	—	—	—	—

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

Drive Package	L						M					
Motor H.P. [W]	1.5 [1118.6]						1.5 [1118.6]					
Blower Sheave	AK66						AK66					
Motor sheave	1VP-44						1VP-50					
Turns Open	0	1	2	**3**	4	5	0	1	2	3	**4**	5
RPM	1119	1072	1019	**967**	915	859	1267	1215	1163	1113	1064	1015

NOTES:
1. Factory sheave settings are shown in bold type.
2. Do not set motor sheave below minimum turns open shown.
3. Re-adjustment of sheave required to achieve rated airflow at ARI minimum E.S.P.
4. Drive data shown is for horizontal airflow with dry coil. add component resistance to duct resistance to determine total E.S.P.

AIRFLOW CORRECTION FACTORS-B072/C072 6 TONS [21.10 kW]

Actual CFM [L/s]	1800 [849]	2000 [944]	2200 [1038]	2400 [1133]	2600 [1227]	2800 [1321]
Total MBH	0.97	0.98	0.99	1.00	1.01	1.02
Sensible MBH	0.91	0.94	0.97	1.00	1.02	1.05
Power KW	0.99	0.99	0.99	1.00	1.00	1.01

[ ] Designates Metric Conversions

COMPONENT AIR RESISTANCE, IWC-B072/C072 6 TONS [21.10 kW]

Component	Standard Indoor Airflow-CFM [L/s]					
	1800 [849]	2000 [944]	2200 [1038]	2400 [1133]	2600 [1227]	2800 [1321]
	Resistance-Inches Water [Kpa]					
Wet Coil	0.031 [0.008]	0.036 [0.009]	0.041 [0.01]	0.047 [0.012]	0.051 [0.013]	0.055 [0.014]
Concentric Diffuser RXRN-FA65 or FA75 & Transition RXMC-CE05	DNA	DNA	DNA	DNA	0.017 [0.042]	0.02 [0.050]
Concentric Diffuser RXRN-AA61 or AA71 & Transition RXMC-CE05	DNA	DNA	DNA	DNA	DNA	DNA
Economizer 100% R.A. Damper Open	0.02 [0.005]	0.03 [0.007]	0.04 [0.01]	0.05 [0.012]	0.06 [0.015]	0.07 [0.017]
Horizontal Economiser 100% R.A. Open	0.02 [0.005]	0.02 [0.005]	0.03 [0.007]	0.03 [0.007]	0.04 [0.01]	0.04 [0.01]
Horizontal Economiser 100% O.A. Damper Open	0.07 [0.017]	0.07 [0.017]	0.07 [0.017]	0.08 [0.02]	0.08 [0.02]	0.08 [0.02]

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

Air Flow CFM [L/s]	Capacity 7.5 Ton [26.4 kW]																																			
	External Static Pressure—Inches of Water [kPa]																																			
	0.1 [.02]		0.2 [.05]		0.3 [.07]		0.4 [.10]		0.5 [.12]		0.6 [.15]		0.7 [.17]		0.8 [.20]		0.9 [.22]		1.0 [.25]		1.1 [.27]		1.2 [.30]		1.3 [.32]		1.4 [.35]		1.5 [.37]		1.6 [.40]		1.7 [.42]		1.8 [.45]		1.9 [.47]		2.0 [.50]	
	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W
2400 [1133]	—	—	—	—	540	580	582	664	612	729	645	812	711	890	740	952	770	1014	799	1076	828	1138	857	1200	887	1261	929	1538	958	1623	987	1709	1017	1794	1046	1879	1075	1965	1105	2050
2500 [1180]	—	—	—	—	552	633	593	717	624	791	656	878	720	950	749	1012	778	1074	808	1136	837	1198	866	1260	895	1322	936	1602	965	1687	995	1773	1024	1858	1053	1944	1083	2029	1112	2114
2600 [1227]	—	—	—	—	564	687	603	769	635	853	667	945	729	1010	758	1072	787	1134	816	1196	846	1258	875	1320	914	1581	943	1666	972	1751	1002	1837	1031	1922	1061	2008	1090	2093	1119	2178
2700 [1274]	—	—	539	670	577	744	614	828	648	923	680	1017	737	1070	766	1132	796	1194	825	1256	854	1318	883	1380	921	1645	950	1730	980	1816	1009	1901	1038	1986	1068	2072	1097	2157	1127	2243
2800 [1321]	—	—	554	733	590	801	625	887	660	993	708	1069	746	1131	775	1192	804	1254	834	1316	863	1378	892	1440	928	1709	958	1794	987	1880	1016	1965	1046	2050	1075	2136	1104	2221	1134	2307
2900 [1369]	—	—	569	801	604	866	638	956	673	1069	725	1129	755	1191	784	1253	813	1315	842	1376	872	1438	906	1688	936	1773	965	1858	994	1944	1024	2029	1053	2115	1082	2200	1112	2285	1141	2371
3000 [1416]	546	741	854	869	617	931	650	1024	685	1144	734	1189	763	1251	792	1313	822	1375	851	1437	880	1498	913	1752	943	1837	972	1923	1002	2008	1031	2093	1060	2179	1090	2264	1119	2350	1148	2435
3100 [1463]	560	804	598	940	632	1010	664	1107	713	1187	743	1249	772	1311	801	1373	830	1435	860	1497	889	1559	921	1816	950	1901	979	1987	1009	2072	1038	2157	1068	2243	1097	2328	1126	2414	1156	2499
3200 [1510]	576	876	612	1011	646	1089	678	1189	722	1247	751	1309	781	1371	810	1433	839	1495	868	1557	898	1619	928	1880	957	1965	987	2051	1016	2136	1045	2222	1075	2307	1104	2392	1134	2478	1163	2563
3300 [1557]	592	954	628	1096	660	1168	692	1274	731	1307	760	1369	789	1431	818	1493	848	1555	877	1617	906	1859	935	1944	965	2029	994	2115	1023	2200	1053	2286	1082	2371	1111	2456	1141	2542	1170	2627
3400 [1605]	607	1030	643	1180	673	1247	710	1306	739	1368	769	1430	798	1491	827	1553	856	1615	886	1677	913	1923	943	2008	972	2094	1001	2179	1031	2264	1060	2350	1089	2435	1119	2521	1148	2606	1178	2691
3500 [1652]	622	1112	658	1271	689	1344	719	1366	748	1428	777	1490	807	1552	836	1613	865	1675	894	1737	920	1987	950	2072	979	2158	1009	2243	1038	2328	1067	2414	1097	2499	1126	2585	1155	2670	1185	2756
3600 [1699]	638	1202	672	1361	704	1440	728	1426	757	1488	786	1550	815	1612	844	1674	874	1735	903	1797	928	2051	957	2136	986	2222	1016	2307	1045	2393	1075	2478	1104	2563	1133	2649	1163	2734	1192	2820

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	869	838	**806**	774	742	710	1157	1106	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	1.00	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]
	Resistance—Inches Water [kPa]						
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 [.02]		0.2 [.05]		0.3 [.07]		0.4 [.10]		0.5 [.12]		0.6 [.15]		0.7 [.17]		0.8 [.20]		0.9 [.22]		1.0 [.25]		1.1 [.27]		1.2 [.30]		1.3 [.32]		1.4 [.35]		1.5 [.37]		1.6 [.40]		1.7 [.42]		1.8 [.45]		1.9 [.47]		2.0 [.50]	
	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W
2700 [1274]	—	—	—	—	—	—	—	—	—	—	708	1009	737	1070	766	1132	796	1194	825	1256	854	1318	883	1380	921	1645	950	1730	980	1816	1009	1901	1038	1966	1068	2072	1097	2157	1127	2243
2800 [1321]	—	—	—	—	—	—	—	—	—	—	717	1069	748	1131	775	1192	804	1254	834	1316	863	1378	892	1440	928	1709	958	1794	987	1880	1016	1965	1046	2050	1075	2136	1104	2221	1134	2307
2900 [1369]	—	—	—	—	—	—	—	—	—	—	725	1129	755	1191	784	1253	813	1315	842	1376	872	1438	906	1688	936	1773	965	1858	994	1944	1024	2029	1053	2115	1082	2200	1112	2285	1141	2371
3000 [1416]	—	—	—	—	—	—	—	—	705	1127	734	1189	763	1251	792	1313	822	1375	851	1437	880	1498	913	1752	943	1837	972	1923	1002	2008	1031	2093	1060	2179	1090	2264	1119	2350	1148	2435
3100 [1463]	—	—	—	—	—	—	—	—	713	1187	743	1249	772	1311	801	1373	830	1435	860	1497	889	1559	921	1816	950	1961	979	987	1009	2072	1038	2157	1068	2243	1097	2328	1126	2414	—	—
3200 [1510]	—	—	—	—	—	—	693	1185	722	1247	761	1309	781	1371	810	1433	839	1495	868	1557	898	1619	928	1880	937	1965	987	2051	1018	2136	1045	2222	1075	2307	1104	2392	1134	2478	—	—
3300 [1557]	—	—	—	—	—	—	701	1246	731	1307	760	1369	789	1431	818	1493	848	1555	877	1617	906	1856	935	1944	968	2029	994	2115	1023	2200	1053	2286	1082	2371	1111	2456	1141	2542	—	—
3400 [1605]	—	—	—	—	681	1244	710	1306	739	1368	769	1430	798	1491	827	1553	856	1615	886	1677	913	1923	943	2008	972	2094	1001	2179	1031	2264	1060	2350	1089	2435	1119	2521	1148	2606	—	—
3500 [1652]	—	—	673	1270	690	1304	719	1366	748	1428	777	1490	807	1552	836	1613	865	1675	894	1737	920	1987	950	2072	979	2158	1009	2243	1038	2328	1067	2414	1097	2499	1126	2585	—	—	—	—
3600 [1699]	—	—	686	1352	698	1364	728	1426	757	1488	786	1550	815	1612	844	1674	874	1735	903	1797	928	2051	957	2136	986	2222	1016	2307	1045	2393	1071	2478	1104	2563	1133	2649	—	—	—	—
3700 [1746]	672	1361	700	1435	727	1510	755	1584	782	1659	810	1733	837	1808	865	1882	933	1896	953	1956	973	2070	993	2183	1002	2297	1030	2410	1054	2524	1075	2637	1111	2751	1140	2864	—	—	—	—
3800 [1793]	686	1443	713	1518	741	1592	768	1667	796	1741	823	1816	851	1890	878	1965	940	2003	960	2075	981	2189	1001	2302	1016	2416	1043	2529	1062	2643	1082	2756	1119	2870	1147	2983	—	—	—	—
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	1029	2534	1057	2648	1069	2761	1090	2875	1127	2988	—	—	—	—	—	—
4000 [1888]	713	1609	740	1683	768	1758	795	1832	823	1907	850	1981	878	2056	935	2085	955	2199	975	2312	996	2426	1016	2539	1043	2653	1070	2767	1077	2880	1097	2994	1135	3107	—	—	—	—	—	—
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	1056	2772	1084	2885	1084	2999	1105	3112	1144	3226	—	—	—	—	—	—

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	1148	1098	1049	999	949	**899**

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-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

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

Component	Standard Indoor Airflow—CFM [L/s]								
	2600 [1227]	**2800 [1321]**	**3000 [1416]**	**3200 [1510]**	**3400 [1604]**	**3600 [1699]**	**3800 [1793]**	**4000 [1888]**	**4200 [1982]**
	Resistance—Inches Water [kPa]								
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]
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
Concentric Diffuser RXRN-AA61 or AA71 & Transition RXMC-CE05	DNA	DNA	DNA	DNA	DNA	0.17 [0.042]	0.18 [0.045]	0.21 [0.052]	0.24 [0.060]
Economizer 100% R.A. Damper Open	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]
Horizontal Economizer 100% R.A. Damper Open	0.04 [0.009]	0.04 [0.010]	0.05 [0.011]	0.05 [0.012]	0.06 [0.014]	0.06 [0.015]	0.07 [0.017]	0.08 [0.020]	0.09 [0.021]
Horizontal Economizer 100% O.A. Damper Open	0.08 [0.020]	0.08 [0.020]	0.10 [0.024]	0.11 [0.027]	0.12 [0.030]	0.13 [0.032]	0.15 [0.036]	0.16 [0.040]	0.18 [0.044]

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

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 [.02]		0.2 [.05]		0.3 [.07]		0.4 [.10]		0.5 [.12]		0.6 [.15]		0.7 [.17]		0.8 [.20]		0.9 [.22]		1.0 [.25]		1.1 [.27]		1.2 [.30]		1.3 [.32]		1.4 [.35]		1.5 [.37]		1.6 [.40]		1.7 [.42]		1.8 [.45]		1.9 [.47]		2.0 [.50]		2.1 [.52]		2.2 [.55]		2.3 [.57]	
	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W
3200 [1510]	—	—	—	—	—	—	657	1170	715	1245	742	1319	770	1394	797	1468	825	1543	852	1617	880	1692	956	1698	976	1703	996	1817	1017	1930	1037	2044	1057	2157	1077	2271	1098	2384	1118	2498	1138	2611	1159	2725	1179	2838
3300 [1557]	—	—	—	—	673	1179	701	1253	728	1328	756	1402	783	1477	811	1551	838	1626	866	1700	943	1705	963	1708	948	1822	976	1935	1024	2049	1044	2162	1065	2276	1085	2390	1105	2503	1125	2617	1146	2730	1166	2844	1186	2957
3400 [1605]	—	—	—	—	687	1261	714	1336	742	1410	769	1485	797	1559	824	1634	852	1708	879	1763	950	1811	971	1827	962	1941	989	2054	1032	2168	1052	2281	1072	2395	1092	2508	1113	2622	1133	2735	1153	2849	1174	2962	1194	3076
3500 [1652]	—	—	673	1270	700	1344	728	1419	755	1493	783	1588	810	1642	838	1717	865	1791	938	1813	958	1832	978	1946	975	2059	1003	2173	1039	2286	1059	2400	1080	2513	1100	2627	1120	2740	1141	2854	1161	2968	1181	3081	—	—
3600 [1699]	—	—	686	1352	714	1427	741	1501	769	1576	796	1650	824	1725	851	1799	879	1874	945	1892	966	1951	986	2065	989	2178	1016	2292	1047	2405	1067	2519	1087	2632	1108	2746	1128	2859	1148	2973	1168	3086	1189	3200	—	—
3700 [1746]	672	1361	700	1435	727	1510	755	1584	782	1659	810	1733	837	1808	865	1882	933	1896	953	1956	973	2070	993	2183	1002	2297	1030	2410	1054	2524	1075	2637	1095	2751	1115	2864	1135	2978	1156	3091	1176	3205	1196	3318	—	—
3800 [1793]	686	1443	713	1518	741	1592	768	1667	796	1741	823	1818	861	1890	878	1965	940	2003	960	2075	981	2189	1001	2302	1016	2416	1043	2529	1062	2643	1082	2756	1102	2870	1123	2983	1143	3097	1163	3210	1183	3324	—	—	—	—
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	1029	2534	1057	2648	1069	2761	1090	2875	1110	2988	1130	3102	1150	3215	1171	3329	1191	3442	—	—	—	—
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	1043	2653	1070	2767	1077	2880	1097	2994	1117	3107	1138	3221	1158	3334	1178	3448	1199	3561	—	—	—	—
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	1056	2772	1084	2885	1084	2999	1105	3112	1125	3226	1145	3339	1166	3453	1186	3566	—	—	—	—	—	—
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	1070	2890	1097	3004	1092	3117	1112	3231	1133	3345	1153	3458	1173	3572	1193	3685	—	—	—	—	—	—
4300 [2029]	753	1857	781	1932	808	2006	836	2081	853	2155	917	2215	937	2328	957	2442	978	2555	998	2669	1018	2782	1039	2896	1083	3009	1111	3123	1099	3236	1120	3350	1140	3453	1160	3577	1181	3690	—	—	—	—	—	—	—	—
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	1097	3128	1124	3241	1107	3355	1127	3468	1148	3582	1168	3695	1188	3809	—	—	—	—	—	—	—	—
4500 [2124]	780	2023	808	2097	835	2172	863	2248	912	2338	932	2452	952	2585	973	2679	993	2793	1013	2906	1033	3020	1054	3133	1110	3247	1138	3360	1115	3474	1135	3587	1155	3701	1175	3814	1196	3928	—	—	—	—	—	—	—	—
4600 [2171]	794	2105	821	2180	840	2254	876	2329	919	2457	940	2571	960	2684	980	2798	1000	2911	1021	3025	1041	3138	1061	3252	1124	3365	1151	3479	1122	3592	1142	3706	1163	3819	1183	3933	—	—	—	—	—	—	—	—	—	—
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	1137	3484	1165	3598	1130	3711	1150	3825	1170	3938	1190	4052	—	—	—	—	—	—	—	—	—	—
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	1151	3603	1178	3716	1137	3830	1157	3943	1178	4057	1198	4170	—	—	—	—	—	—	—	—	—	—

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	**845**	810	775	739	704	669	1138	1089	1041	992	943	**894**

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 [2077]	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]**
	Resistance—Inches Water [kPa]								
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]
Concentric Diffuser RXRN-FA65 or FA75 & Transition RXMC-CD04	0.31 [0.077]	0.37 [0.092]	DNA	DNA	DNA	DNA	DNA	DNA	DNA
Concentric Diffuser RXRN-AA61 or AA71 & Transition RXMC-CE05	DNA	DNA	0.17 [0.042]	0.18 [0.045]	0.21 [0.052]	0.24 [0.060]	0.27 [0.067]	DNA	DNA
Concentric Diffuser RXRN-AA66 or AA76 & Transition RXMC-CF06	DNA	DNA	DNA	DNA	DNA	DNA	DNA	0.31 [0.077]	0.32 [0.080]
Economizer 100% R.A. Damper Open	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]
Horizontal Economizer 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 100% O.A. Damper Open	0.11 [0.027]	0.12 [0.030]	0.13 [0.032]	0.15 [0.0.36]	0.16 [0.040]	0.18 [0.044]	0.19 [0.047]	0.20 [0.50]	0.21 [0.052]

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

Air Flow CFM [L/s]	Capacity 12.5 Ton [49.3 kW]																																			
	External Static Pressure—Inches of Water [kPa]																																			
	0.1 [.02]		0.2 [.05]		0.3 [.07]		0.4 [.10]		0.5 [.12]		0.6 [.15]		0.7 [.17]		0.8 [.20]		0.9 [.22]		1.0 [.25]		1.1 [.27]		0.2 [.30]		1.3 [.32]		1.4 [.35]		1.5 [.37]		1.6 [.40]		1.7 [.42]		1.8 [.45]		1.9 [.47]		2.0 [.50]	
	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W
3800 [1793]	—	—	—	—	—	—	828	1605	854	1661	879	1722	904	1786	929	1853	954	1924	979	1998	1004	2075	1028	2156	1052	2241	1076	2328	1099	2420	1123	2514	1146	2613	1169	2714	1192	2819	1215	2928
4000 [1888]	—	—	—	—	830	1735	855	1796	880	1859	905	1927	930	1997	955	2072	979	2149	1004	2230	1028	2315	1052	2403	1075	2494	1099	2589	1122	2687	1145	2789	1168	2894	1190	3002	1213	3114	1235	3230
4200 [1982]	—	—	832	1877	858	1941	883	2008	908	2079	932	2153	957	2230	981	2312	1005	2396	1029	2484	1053	2575	1076	2670	1099	2769	1122	2870	1145	2975	1168	3084	1190	3196	1212	3312	1234	3430	1256	3553
4400 [2076]	836	2029	862	2096	886	2167	911	2241	936	2319	960	2400	984	2485	1008	2573	1031	2664	1055	2759	1078	2858	1101	2959	1124	3065	1146	3173	1169	3285	1191	3401	1213	3520	1235	3642	1256	3768	1278	3897
4600 [2171]	867	2263	891	2337	916	2415	940	2496	964	2581	988	2669	1012	2760	1035	2855	1058	2954	1081	3056	1104	3161	1127	3270	1149	3382	1171	3497	1193	3616	1215	3739	1236	3865	1258	3994	1279	4127	1300	4263
4800 [2265]	897	2518	922	2599	946	2684	970	2772	993	2864	1017	2959	1040	3057	1063	3159	1086	3265	1108	3373	1131	3485	1153	3601	1175	3720	1196	3843	1218	3969	1239	4098	1261	4231	1282	4367	—	—	—	—
5000 [2359]	929	2795	953	2883	976	2975	1000	3070	1023	3168	1046	3270	1069	3375	1091	3484	1114	3597	1136	3712	1158	3831	1179	3954	1201	4080	1222	4209	1244	4342	1264	4479	1285	4618	—	—	—	—	—	—
5200 [2454]	961	3093	984	3188	1007	3286	1030	3388	1053	3494	1076	3603	1098	3715	1120	3831	1142	3950	1164	4072	1186	4199	1207	4328	1228	4461	1249	4597	1270	4737	1290	4880	—	—	—	—	—	—	—	—
5400 [2548]	993	3412	1016	3514	1039	3619	1062	3728	1084	3841	1106	3956	1128	4076	1150	4198	1171	4324	1193	4454	1214	4587	1235	4723	1256	4863	1276	5007	1296	5153	—	—	—	—	—	—	—	—	—	—
5600 [2643]	1026	3752	1049	3861	1071	3974	1093	4089	1115	4209	1137	4331	1159	4458	1180	4587	1201	4720	1222	4857	1243	4997	1263	5140	1284	5287	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5800 [2737]	1060	4114	1082	4230	1104	4349	1126	4472	1147	4598	1169	4728	1190	4861	1211	4997	1232	5137	1252	5281	1272	5428	1292	5578	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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

Drive Package	L							M						
Motor H.P. [W]	3 [2237.1]							5 [3728.5]						
Blower Sheave	BK72H							BK85H						
Motor Sheave	1VP-44							1VP-65						
Turns Open	0	1	2	3	4	**5**	6	0	1	2	**3**	4	5	6
RPM	|	1051	1009	966	920	**876**	824	|	1294	1256	**1216**	1177	1136	1094

NOTES: 1. Factory sheave settings are shown in bold type
2. Do not set motor sheave below minimum or maximum turns open shown
3. Re-adjustment of sheave required to achieve rated airflow at AHRI minimum External Static Pressur
4. Drive data shown is for horizontal airflow with dry coil. Add component resistance (below) to duct resistance to determine total External Static Pressur

COMPONENT AIRFLOW RESISTANCE-B151/C151-12.5 TON [43.9kW]

CFM [L/s]	3800 [1793]	4000 [1888]	4200 [1982]	4400 [2076]	4600 [2171]	4800 [2265]	5000 [2359]	5200 [2454]	5400 [2548]	5600 [2643]	5800 [2737]
	Resistance — Inches of Water [kPa]										
Wet Coil	0.08 [.02]	0.09 [.02]	0.09 [.02]	0.10 [.02]	0.10 [.02]	0.11 [.03]	0.11 [.03]	0.12 [.03]	0.13 [.03]	0.13 [.03]	0.14 [.03]
Downflow Economizer RA Damper Open	0.12 [.03]	0.13 [.03]	0.14 [.03]	0.15 [.04]	0.16 [.04]	0.17 [.04]	0.18 [.04]	0.19 [.05]	0.20 [.05]	0.21 [.05]	0.22 [.05]
Horizontal Economizer RA Damper Open	0.07 [.02]	0.07 [.02]	0.08 [.02]	0.08 [.02]	0.09 [.02]	0.10 [.02]	0.10 [.02]	0.11 [.03]	0.11 [.03]	0.12 [.03]	0.13 [.03]
Concentric Grill RXRN-AA61 or RXRN-AA71 & Transition RXMC-CE05	0.19 [.05]	0.21 [.05]	0.24 [.06]	0.27 [.07]	0.30 [.07]	0.33 [.08]	0.36 [.09]	0.40 [.10]	0.44 [.11]	0.48 [.12]	0.52 [.13]
Concentric Grill RXRN-AA66 or RXRN-AA76 & Transition RXMC-CF06	0.23 [.06]	0.25 [.06]	0.27 [.07]	0.29 [.07]	0.30 [.07]	0.32 [.08]	0.34 [.08]	0.36 [.09]	0.38 [.09]	0.40 [.10]	0.43 [.11]

AIRFLOW CORRECTION FACTORS-B151/C151-12.5 TON [43.9kW]

	CFM [L/s]	3800 [1793]	4000 [1888]	4200 [1982]	4400 [2076]	4600 [2171]	4800 [2265]	5000 [2359]	5200 [2454]	5400 [2548]	5600 [2643]	5800 [2737]
	Total MBH	0.98	0.99	1.00	1.01	1.02	1.02	1.03	1.04	1.05	1.06	1.07
	Sensible MBH	0.93	0.96	1.00	1.04	1.07	1.11	1.14	1.18	1.21	1.25	1.28
	Power kW	0.99	1.00	1.00	1.00	1.01	1.01	1.02	1.02	1.03	1.03	1.03

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/	No Heat	—	—	—	—	35/35	40/50	40/50	—	—	35/35	40/50	40/50
RLNL-C073CL	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/	No Heat	—	—	—	—	43/43	45/50	45/50	—	—	43/43	45/50	45/50
RLNL-C090CL/	CC10C	1	7.2/9.6	24.56/32.75	20/23.1	43/43	50/50	50/50	25/29	25/30	—	—	—
RLNL-H090CR	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	50/50	—	—	—
	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/	No Heat	—	—	—	—	49/49	50/60	50/60	—	—	49/49	50/60	50/60
RLNL-C102CL/	CC10C	1	7.2/9.6	24.56/32.75	20/23.1	49/49	60/60	60/60	25/29	25/30	—	—	—
RLNL-H102CR	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/	No Heat	—	—	—	—	49/49	50/60	50/60	—	—	49/49	50/60	50/60
RLNL-C120CL/	CC10C	1	7.2/9.6	24.56/32.75	20/23.1	49/49	60/60	60/60	25/29	25/30	—	—	—
RLNL-H120CR	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	21.6/28.6	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/	No Heat	—	—	—	—	67/67	70/80	70/80	—	—	67/67	70/80	70/80
RLNL-C151CL/	CC10C	1	7.2/9.6	24.56/32.75	20/23.1	67/67	80/80	80/80	25/29	25/30	—	—	—
RLNL-H151CR	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/	No Heat	—	—	—	—	35/35	40/50	40/50	—	—	35/35	40/50	40/50
RLNL-C073CM	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/	No Heat	—	—	—	—	43/43	45/50	45/50	—	—	43/43	45/50	45/50
RLNL-C090CM/	CC10C	1	7.2/9.6	24.56/32.75	20/23.1	43/43	50/50	50/50	25/29	25/30	—	—	—
RLNL-H090CS	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/	No Heat	—	—	—	—	54/54	55/60	55/60	—	—	54/54	55/60	55/60
RLNL-C102CM/	CC10C	1	7.2/9.6	24.56/32.75	20/23.1	54/54	60/60	60/60	25/29	25/30	—	—	—
RLNL-H102CS	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/	No Heat	—	—	—	—	54/54	55/60	55/60	—	—	54/54	55/60	55/60
RLNL-C120CM/	CC10C	1	7.2/9.6	24.56/32.75	20/23.1	54/54	60/60	60/60	25/29	25/30	—	—	—
RLNL-H120CS	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/	No Heat	—	—	—	—	71/71	75/90	75/90	—	—	71/71	75/90	75/90
RLNL-C151CM/	CC10C	1	7.2/9.6	24.56/32.75	20/23.1	71/71	80/90	80/90	25/29	25/30	—	—	—
RLNL-H151CS	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/	No Heat	—	—	—	—	48/48	50/60	50/60	—	—	48/48	50/60	50/60
RLNL-C090CN/	CC10C	1	7.2/9.6	24.56/32.75	20/23.1	48/48	60/60	60/60	25/29	25/30	—	—	—
RLNL-H090CT	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/	No Heat	—	—	—	—	16	20/20	—	—	—	16	20/20	—
RLNL-C073DL	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/	No Heat	—	—	—	—	21	25/25	—	—	—	21	25/25	—
RLNL-C090DL/	CC10D	1	9.6	32.75	11.5	21	25/25	—	15	15	—	—	—
RLNL-H090DR	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/	No Heat	—	—	—	—	23	25/25	—	—	—	23	25/25	—
RLNL-C102DL/	CC10D	1	9.6	32.75	11.5	23	25/25	—	15	15	—	—	—
RLNL-H102DR	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/	No Heat	—	—	—	—	25	25/30	—	—	—	25	25/30	—
RLNL-C120DL/	CC10D	1	9.6	32.75	11.5	25	30/30	—	15	15	—	—	—
RLNL-H120DR	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/	No Heat	—	—	—	—	33	35/40	—	—	—	33	35/40	—
RLNL-C151DL/	CC10D	1	9.6	32.75	11.5	33	40/40	—	15	15	—	—	—
RLNL-H151DR	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/	No Heat	—	—	—	—	16	20/20	—	—	—	16	20/20	—
RLNL-C073DM	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/	No Heat	—	—	—	—	21	25/25	—	—	—	21	25/25	—
RLNL-C090DM/	CC10D	1	9.6	32.75	11.5	21	25/25	—	15	15	—	—	—
RLNL-H090DS	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/	No Heat	—	—	—	—	26	30/30	—	—	—	26	30/30	—
RLNL-C102DM/	CC10D	1	9.6	32.75	11.5	26	30/30	—	15	15	—	—	—
RLNL-H102DS	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/	No Heat	—	—	—	—	28	30/35	—	—	—	28	30/35	—
RLNL-C120DM/	CC10D	1	9.6	32.75	11.5	28	30/35	—	15	15	—	—	—
RLNL-H120DS	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/	No Heat	—	—	—	—	36	40/45	—	—	—	36	40/45	—
RLNL-C151DM/	CC10D	1	9.6	32.75	11.5	36	40/45	—	15	15	—	—	—
RLNL-H151DS	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/	No Heat	—	—	—	—	24	25/30	—	—	—	24	25/30	—
RLNL-C090DN/	CC10D	1	9.6	32.75	11.5	24	30/30	—	15	15	—	—	—
RLNL-H090DT	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/	No Heat	—	—	—	—	13	15/15	—	—	—	13	15/15	—
RLNL-C073YL	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/	No Heat	—	—	—	—	16	20/20	—	—	—	16	20/20	—
RLNL-C090YL	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/	No Heat	—	—	—	—	19	20/20	—	—	—	19	20/20	—
RLNL-C102YL	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/	No Heat	—	—	—	—	19	20/20	—	—	—	19	20/20	—
RLNL-C120YL	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/	No Heat	—	—	—	—	28	30/35	—	—	—	28	30/35	—
RLNL-C151YL	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/	No Heat	—	—	—	—	13	15/15	—	—	—	13	15/15	—
RLNL-C073YM	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/	No Heat	—	—	—	—	16	20/20	—	—	—	16	20/20	—
RLNL-C090YM	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/	No Heat	—	—	—	—	24	25/30	—	—	—	24	25/30	—
RLNL-C102YM	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/	No Heat	—	—	—	—	24	25/30	—	—	—	24	25/30	—
RLNL-C120YM	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/	No Heat	—	—	—	—	28	30/35	—	—	—	28	30/35	—
RLNL-C151YM	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/	No Heat	—	—	—	—	21	25/25	—	—	—	21	25/25	—
RLNL-C090YN	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	—	—	—

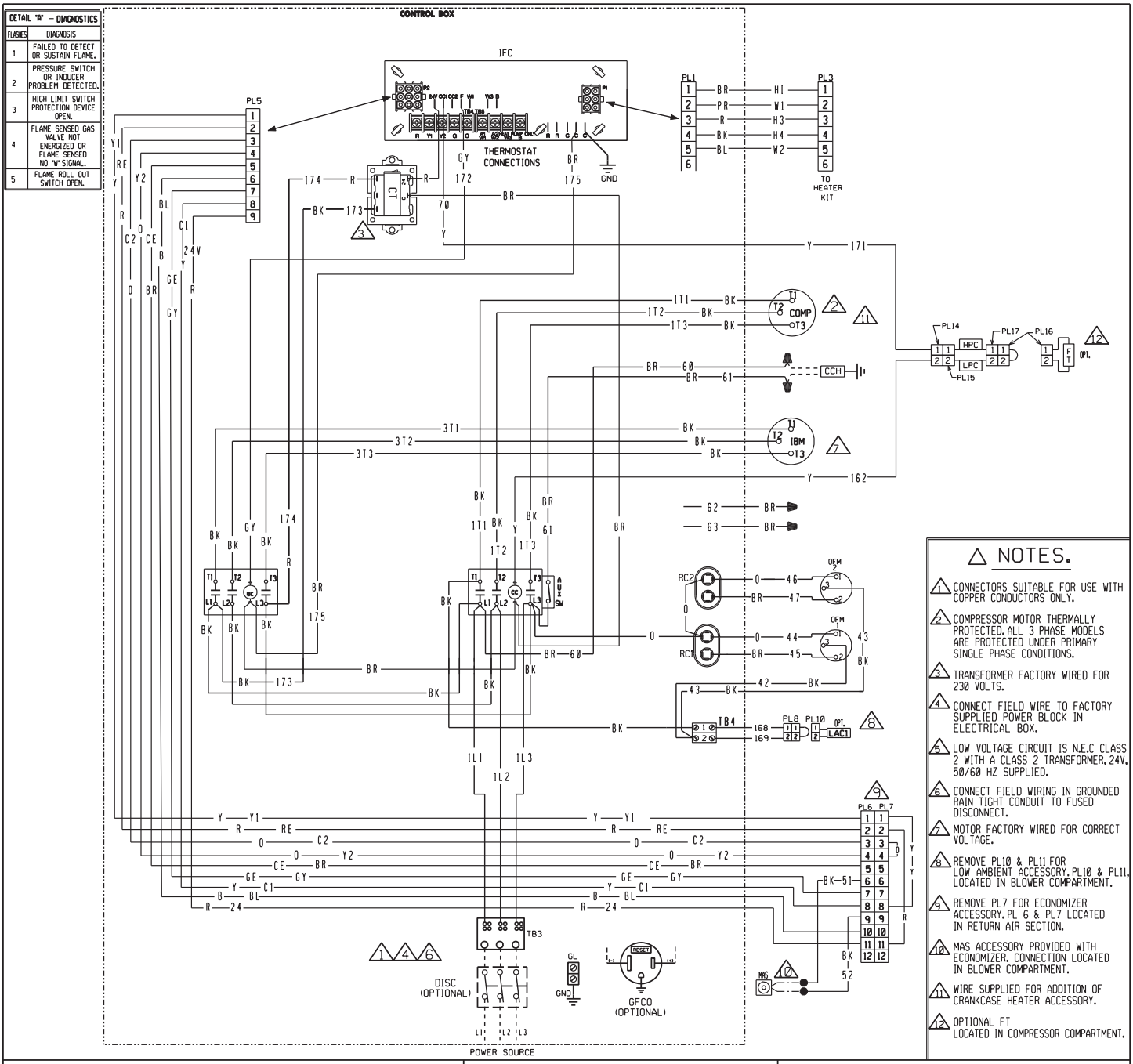
XXI. TROUBLE SHOOTING CHART

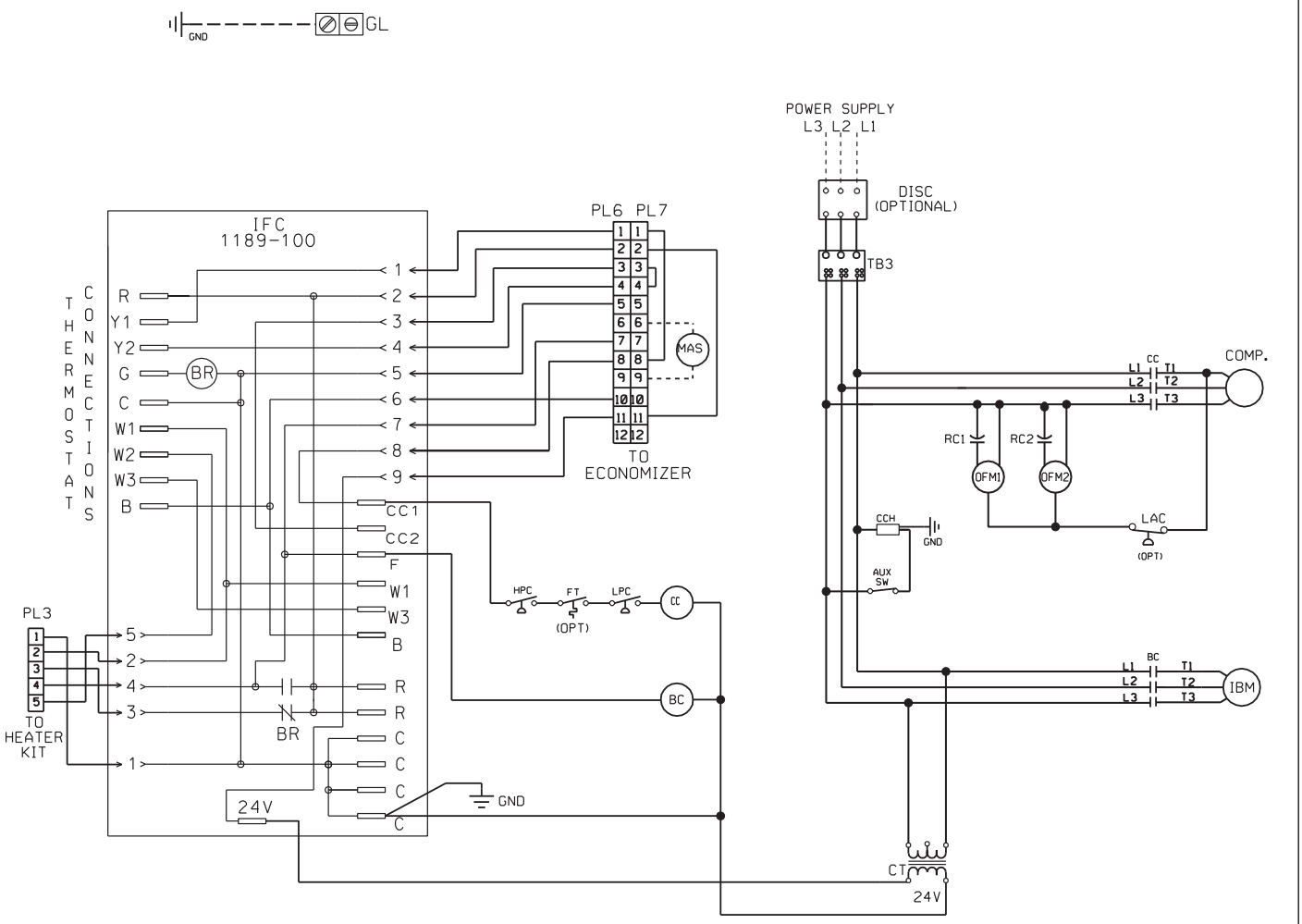
⚠ WARNING

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	• 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	• 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	• Run capacitor defective (single phase only) • Loose connection • Compressor stuck, grounded or open motor winding open internal overload. • Low voltage condition	• 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	• Improperly sized unit • Improper airflow • Incorrect refrigerant charge • Air, non-condensibles or moisture in system • Incorrect voltage	• 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	• Incorrect voltage • Defective overload protector • Refrigerant undercharge	• At compressor terminals, voltage must be ± 10% of nameplate marking when unit is operating. • Replace - check for correct voltage • Add refrigerant
Registers sweat	• Low evaporator airflow	• Increase speed of blower or reduce restriction - replace air filter
High head-low vapor pressures	• Restriction in liquid line, expansion device or filter drier • Flow check piston size too small • Incorrect capillary tubes • TXV does not open	• Remove or replace defective component • Change to correct size piston • Change coil assembly • Replace TXV
High head-high or normal vapor pressure - Cooling mode	• Dirty condenser coil • Refrigerant overcharge • Condenser fan not running • Air or non-condensibles in system	• Clean coil • Correct system charge • Repair or replace • Recover refrigerant, evacuate & recharge
High head-high or normal vapor pressure - Heating mode	• Low air flow - condenser coil • Refrigerant overcharge • Air or non-condensibles in system • Dirty condenser coil	• Check filters - correct to speed • Correct system charge • Recover refrigerant, evacuate & recharge • Check filter - clean coil
Low head-high vapor pressures	• Defective Compressor valves	• Replace compressor
Low vapor - cool compressor - iced evaporator coil	• Low evaporator airflow • Operating below 65°F outdoors • Moisture in system • TXV limiting refrigerant flow	• 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	• Excessive load • Defective compressor	• Recheck load calculation • Replace
Fluctuating head & vapor pressures	• TXV hunting • Air or non-condensibles in system	• 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	• Air or non-condensibles in system	• Recover refrigerant, evacuate & recharge

XXII. WIRING DIAGRAMS





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

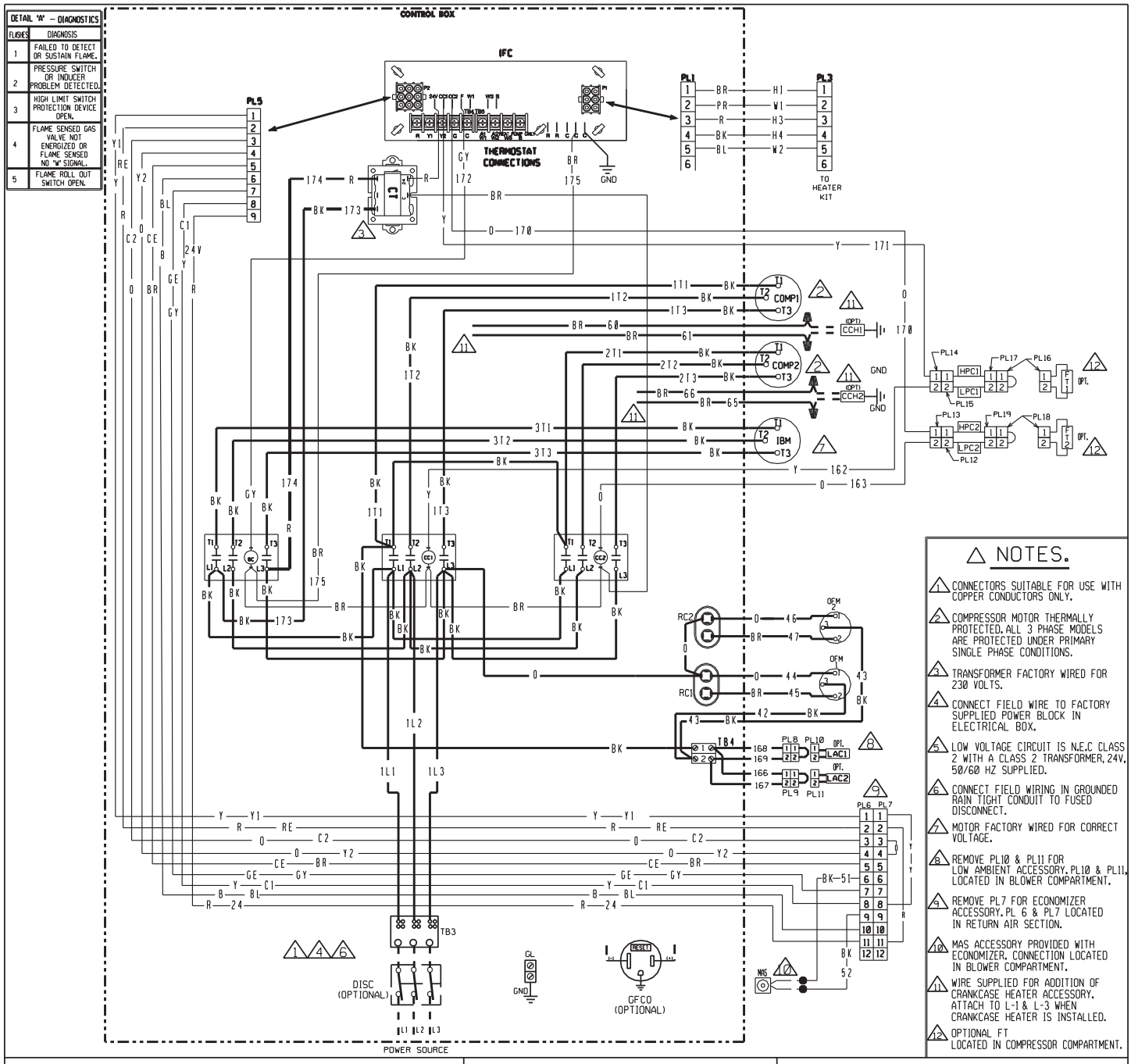
BK	BLACK	O	ORANGE
BR	BROWN	PR	PURPLE
BL	BLUE	R	RED
G	GREEN	W	WHITE
GY	GRAY	Y	YELLOW

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

vertsch3.dgn



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
PL	PLUG
RC	RUN CAPACITOR
SE	SPARK ELECTRODE
TB	TERMINAL BLOCK
	WIRE NUT

WIRE COLOR CODE

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

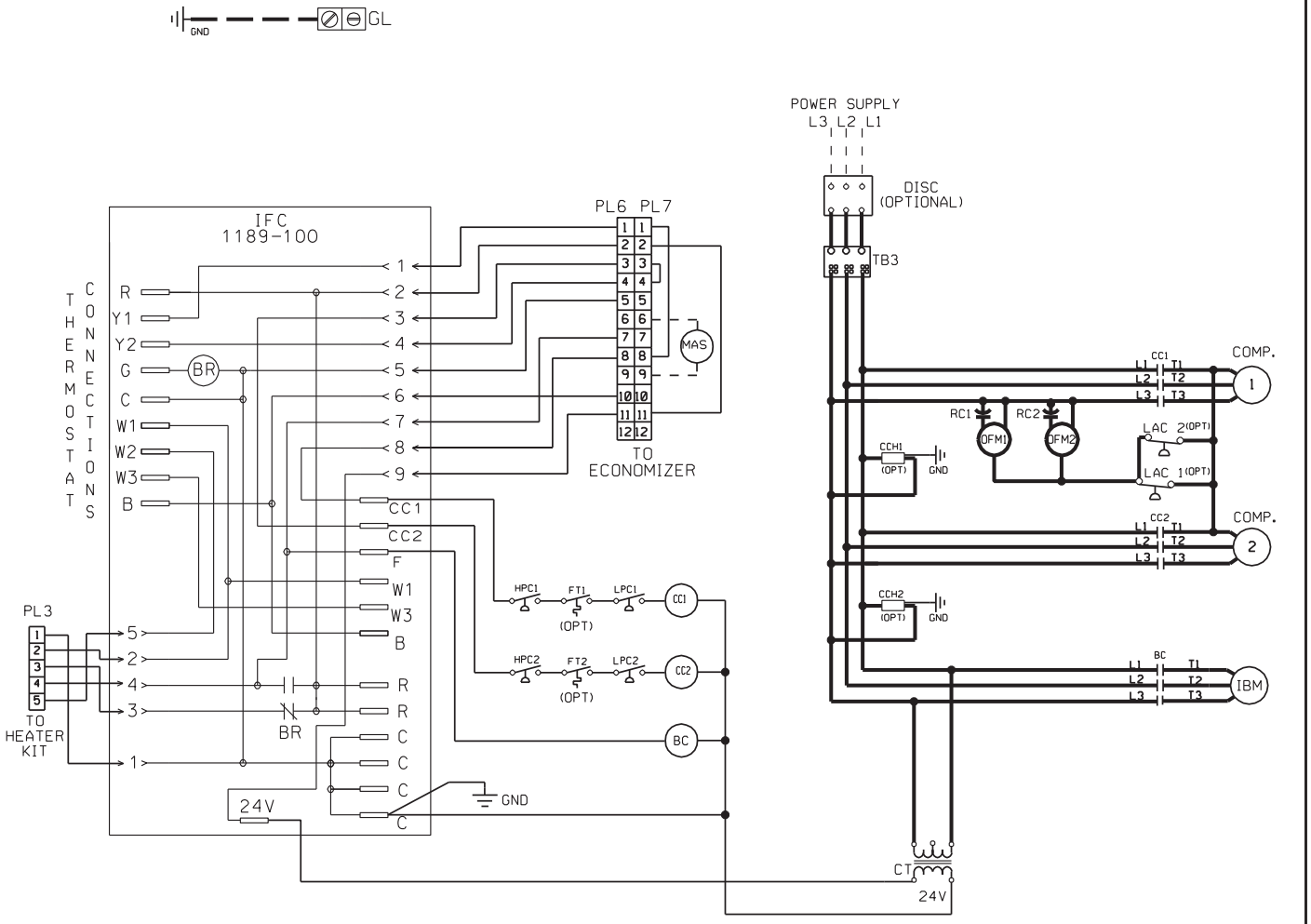
WIRING DIAGRAM

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
BR	BLOWER RELAY
CC	COMPRESSOR CONTACTOR
CCH	CRANKCASE HEATER
COMP	COMPRESSOR
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
MAS	MIXED AIR SENSOR
OFM	OUTDOOR FAN MOTOR
OPT	OPTIONAL
PL	PLUG
RC	RUN CAPACITOR
TB	TERMINAL BLOCK

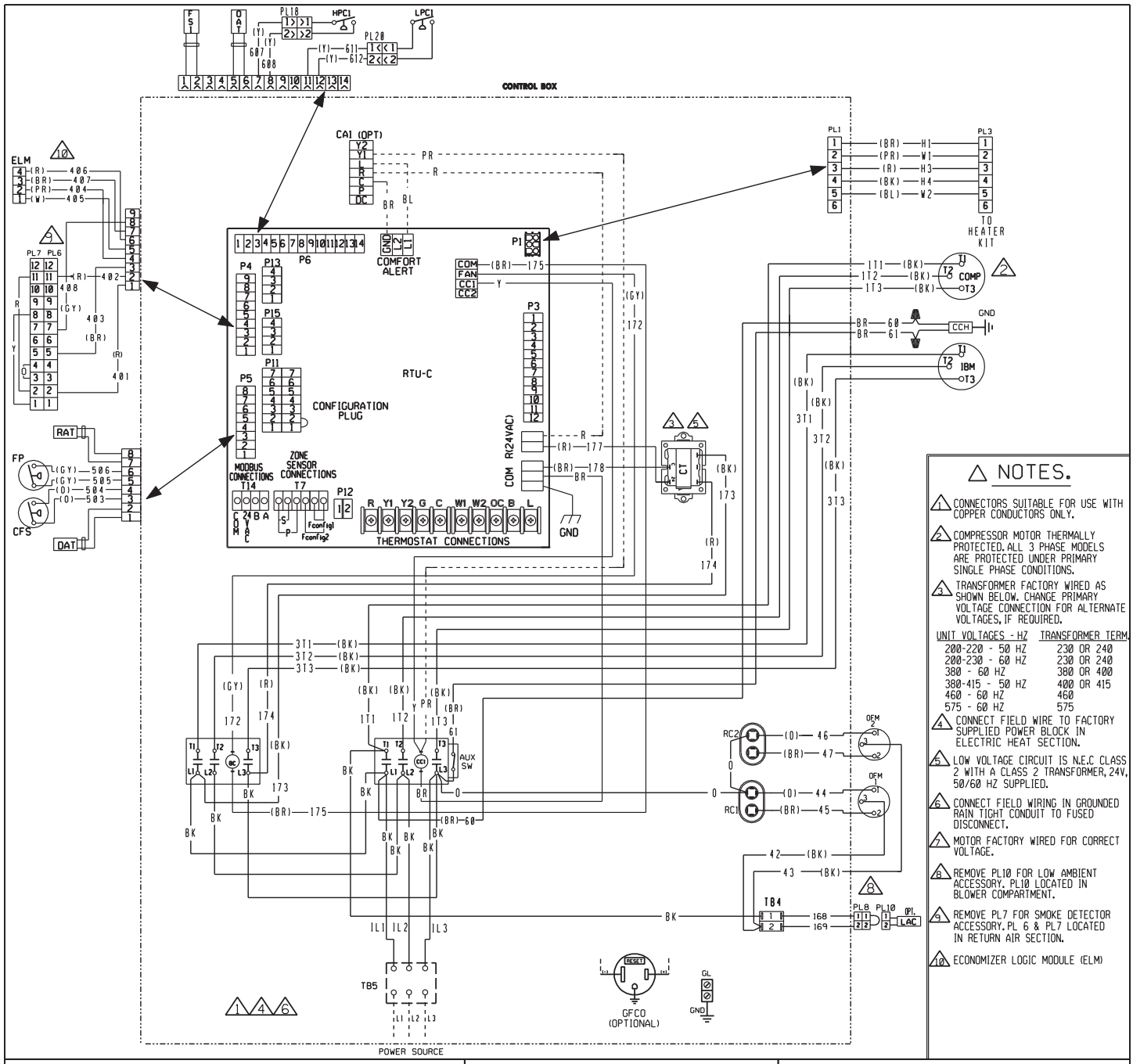
WIRE COLOR CODE

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



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 PROVING
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
	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.)

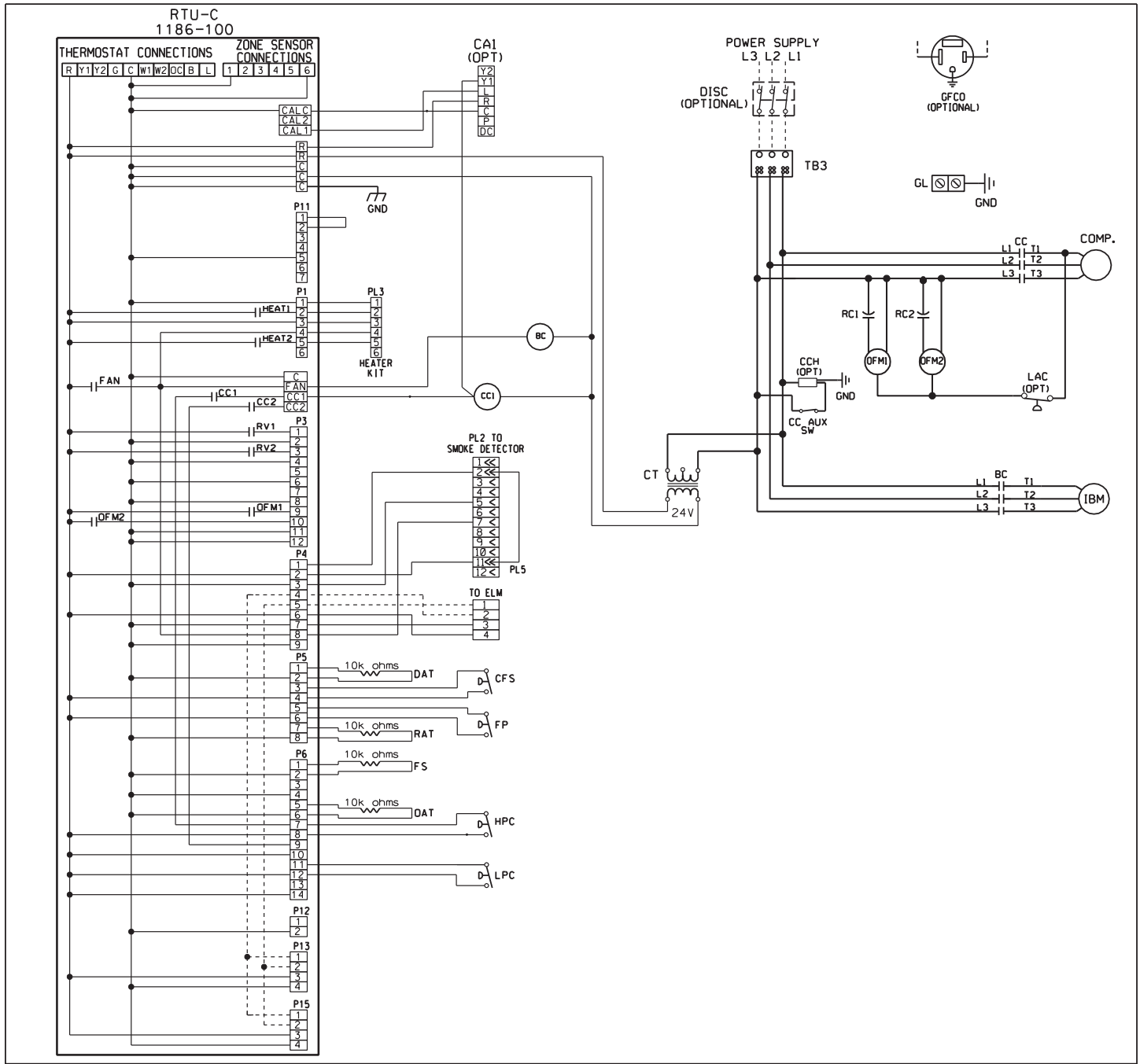
WARNING
-CABINET MUST BE PERMANENTLY GROUNDED AND CONFORM TO I.E.C., N.E.C., C.E.C., AND LOCAL CODES AS APPLICABLE.

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
GFCO	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
OAT	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.)

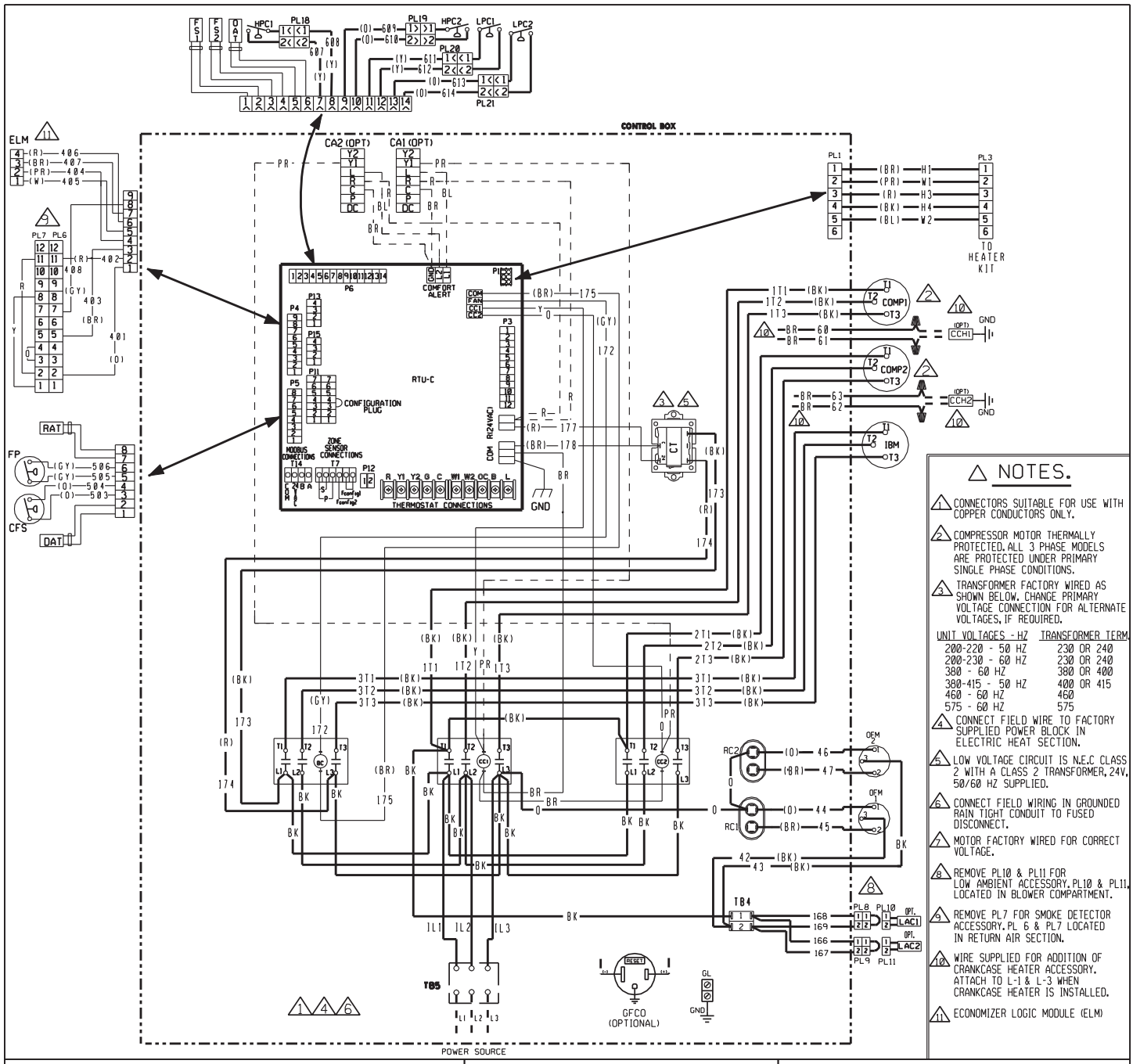
WARNING
- -CABINET MUST BE PERMANENTLY GROUNDED AND CONFORM TO I.E.C., N.E.C., C.E.C., AND LOCAL CODES AS APPLICABLE.

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	APP. BY	DATE	DWG. NO.	REV
MGR		7-16-09	90-103246-04	02



NOTES.

1. CONNECTORS SUITABLE FOR USE WITH COPPER CONDUCTORS ONLY.
2. COMPRESSOR MOTOR THERMALLY PROTECTED. ALL 3 PHASE MODELS ARE PROTECTED UNDER PRIMARY SINGLE PHASE CONDITIONS.
3. 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

4. CONNECT FIELD WIRE TO FACTORY SUPPLIED POWER BLOCK IN ELECTRIC HEAT SECTION.
5. LOW VOLTAGE CIRCUIT IS N.E.C CLASS 2 WITH A CLASS 2 TRANSFORMER, 24V, 50/60 HZ SUPPLIED.
6. CONNECT FIELD WIRING IN GROUNDED RAIN TIGHT CONDUIT TO FUSED DISCONNECT.
7. MOTOR FACTORY WIRED FOR CORRECT VOLTAGE.
8. REMOVE PL10 & PL11 FOR LOW AMBIENT ACCESSORY. PL10 & PL11 LOCATED IN BLOWER COMPARTMENT.
9. REMOVE PL7 FOR SMOKE DETECTOR ACCESSORY. PL 6 & PL7 LOCATED IN RETURN AIR SECTION.
10. WIRE SUPPLIED FOR ADDITION OF CRANKCASE HEATER ACCESSORY. ATTACH TO L-1 & L-3 WHEN CRANKCASE HEATER IS INSTALLED.
11. 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 PROVING
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
⚠	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

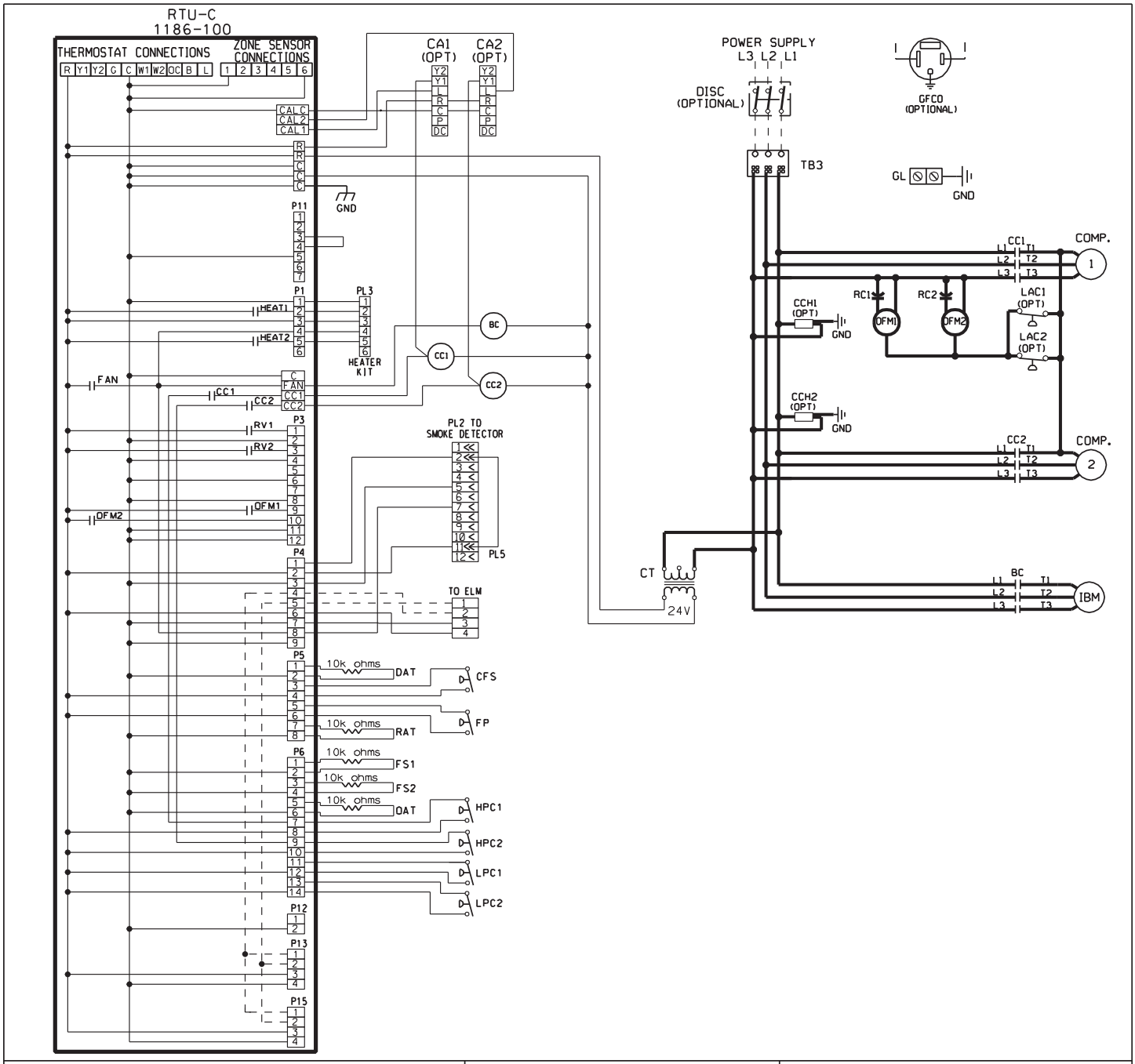
WIRING DIAGRAM

(-)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		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

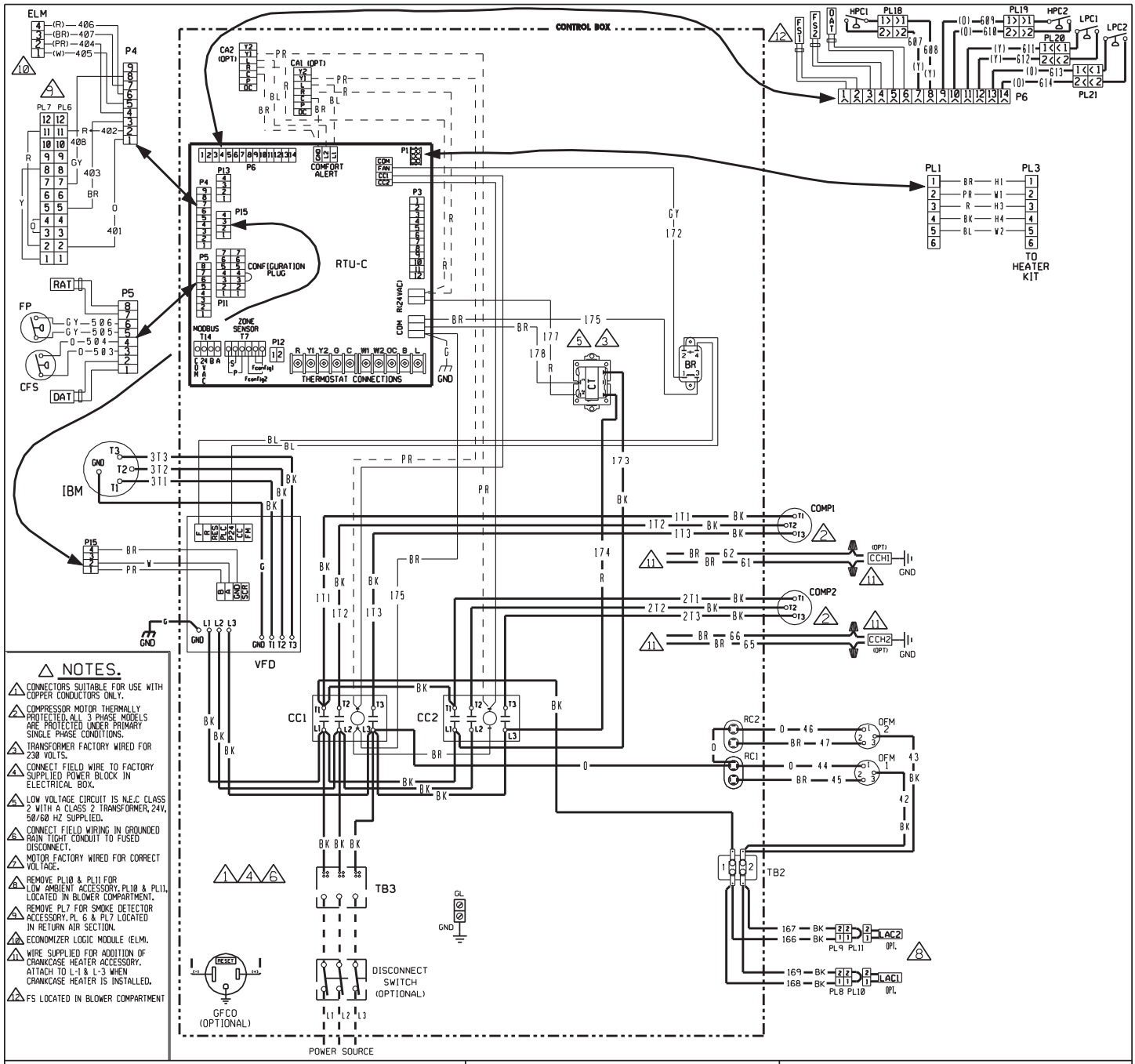
WIRING SCHEMATIC

(-)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.

1. CONNECTORS SUITABLE FOR USE WITH COPPER CONDUCTORS ONLY.
2. COMPRESSOR MOTOR THERMALLY PROTECTED. ALL 3 PHASE MODELS ARE PROTECTED UNDER PRIMARY SINGLE PHASE CONDITIONS.
3. TRANSFORMER FACTORY WIRED FOR 230 VOLTS.
4. CONNECT FIELD WIRE TO FACTORY SUPPLIED POWER BLOCK IN ELECTRICAL BOX.
5. LOW VOLTAGE CIRCUIT IS N.E.C CLASS 2 WITH A CLASS 2 TRANSFORMER, 24V, 50/60 HZ SUPPLIED.
6. CONNECT FIELD WIRING IN GROUNDED RAIN TIGHT CONDUIT TO FUSED DISCONNECT.
7. MOTOR FACTORY WIRED FOR CORRECT VOLTAGE.
8. REMOVE PL10 & PL11 FOR LOW AMBIENT ACCESSORY. PL10 & PL11, LOCATED IN BLOWER COMPARTMENT.
9. REMOVE PL7 FOR SMOKE DETECTOR ACCESSORY. PL 6 & PL7 LOCATED IN RETURN AIR SECTION.
10. ECONOMIZER LOGIC MODULE (ELM).
11. WIRE SUPPLIED FOR ADDITION OF CRANKCASE HEATER ACCESSORY. ATTACH TO L-1 & L-3 WHEN CRANKCASE HEATER IS INSTALLED.
12. FS LOCATED IN BLOWER COMPARTMENT

COMPONENT CODE

BR	BLOWER RELAY
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 PROVING
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
LC	LIMIT 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
VFD	VARIABLE FREQUENCY DRIVE
	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

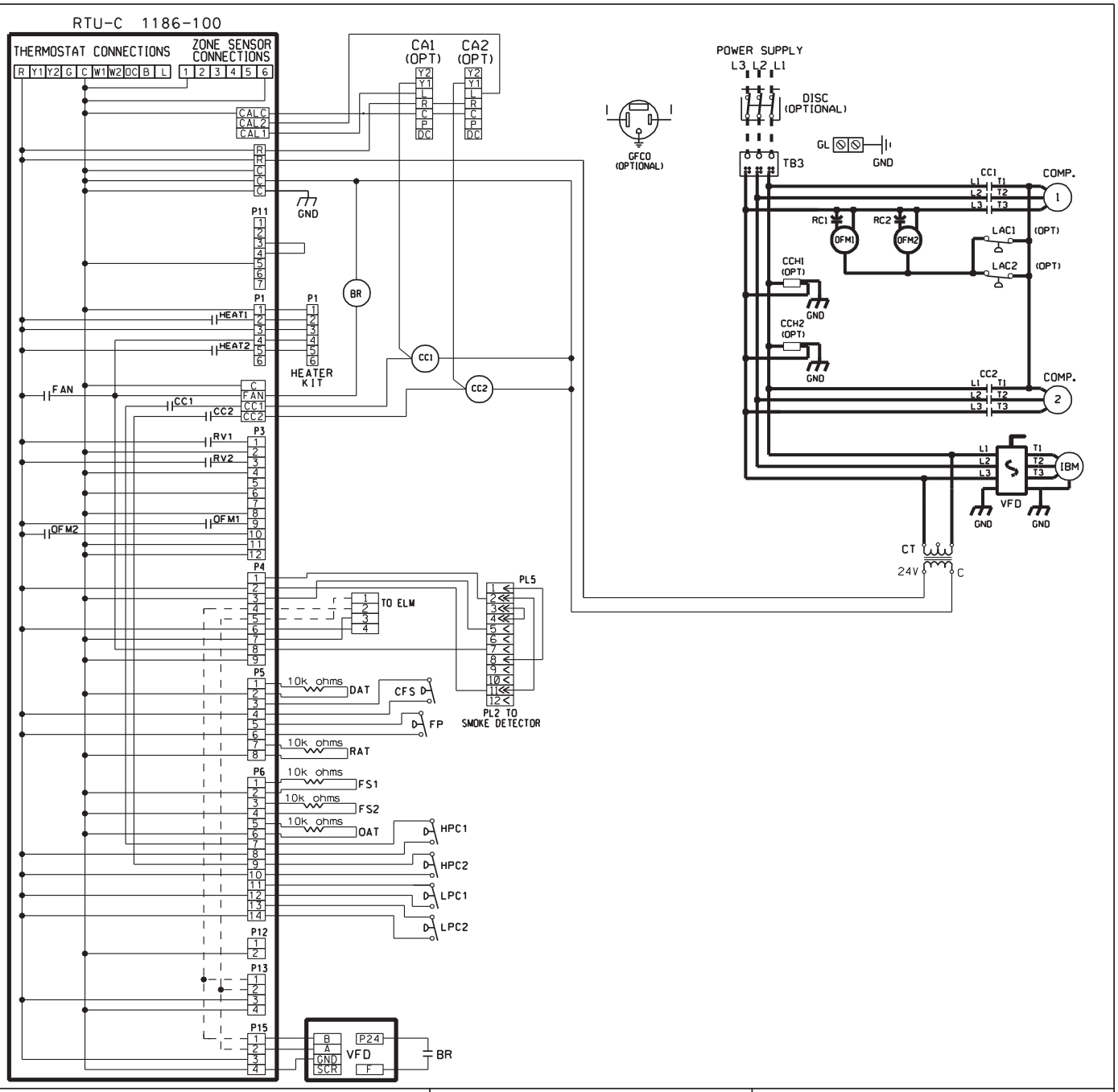
WIRING DIAGRAM

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



COMPONENT CODE

BR	BLOWER RELAY
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 PROVING
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
LC	LIMIT 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
VFD	VARIABLE FREQUENCY DRIVE
	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

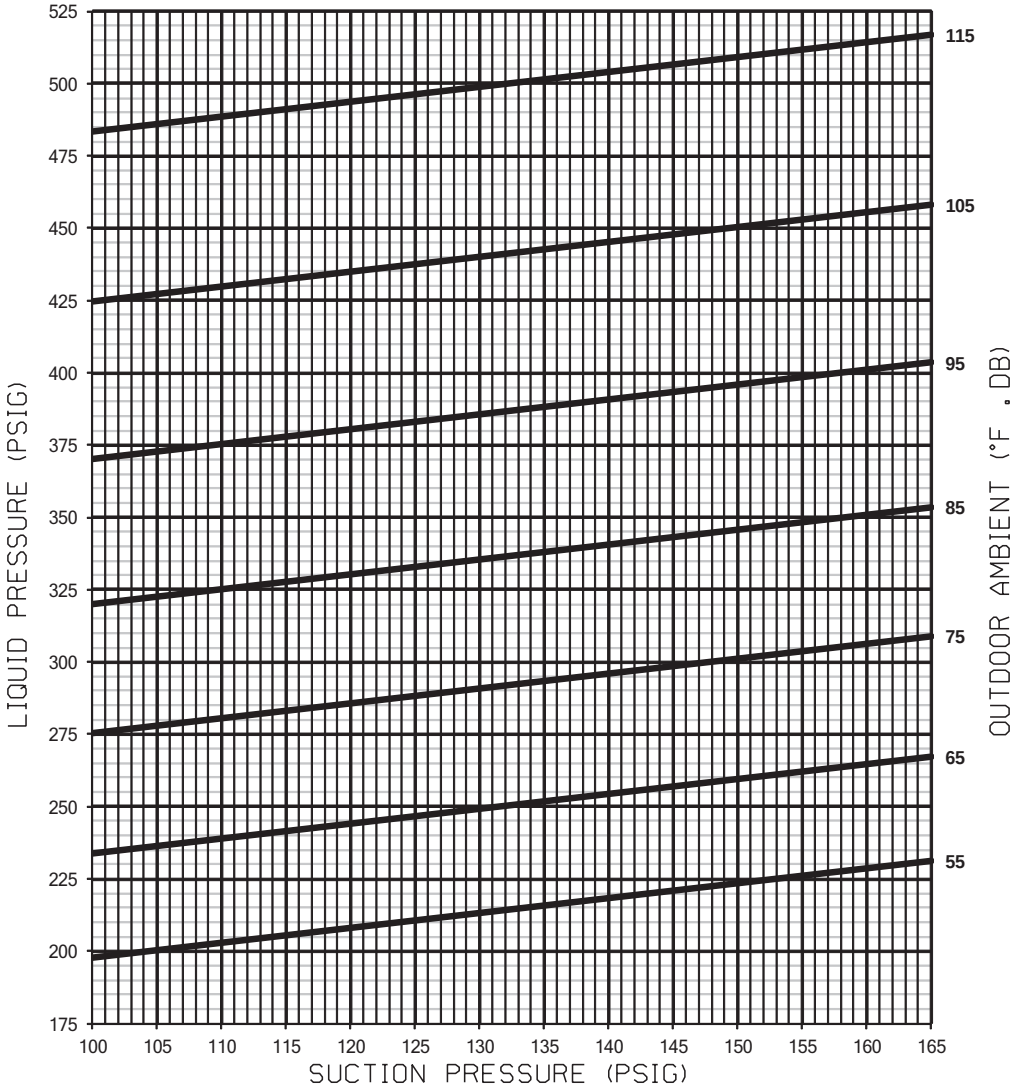
RLNL SYSTEM CHARGE CHARTS

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.



92-102259-37-01

RLNL SYSTEM CHARGE CHARTS

FIGURE 17

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

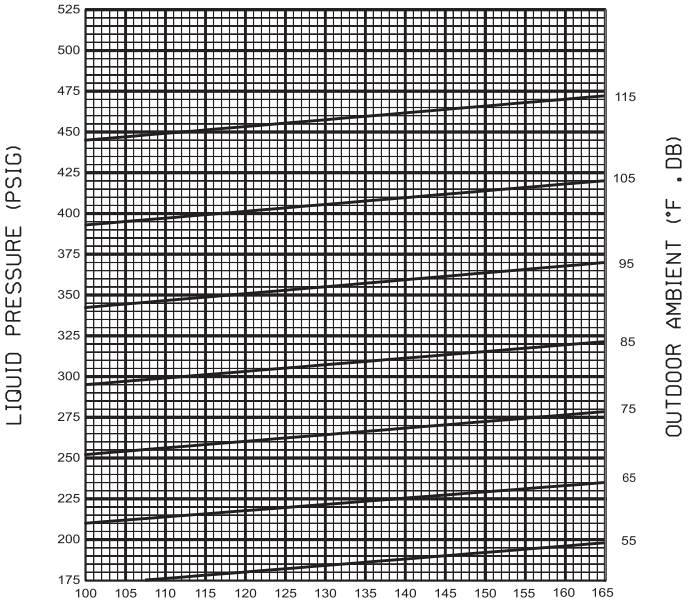
CAUTION:

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

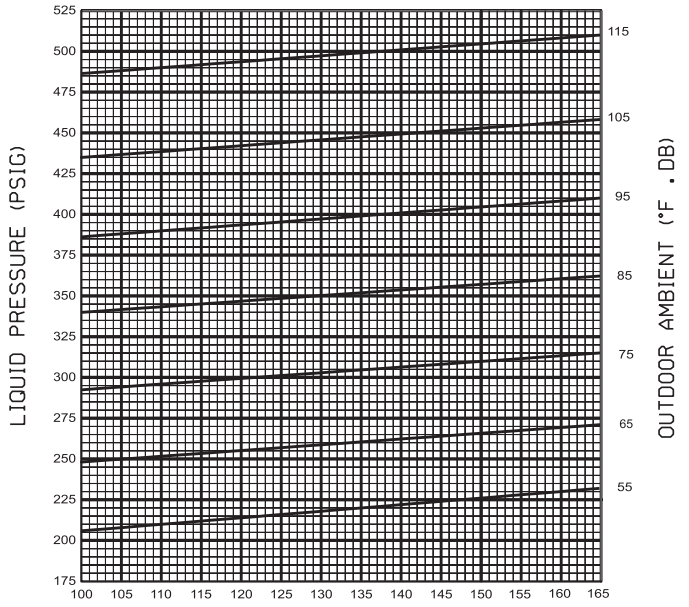
INSTRUCTIONS:

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.



CIRCUIT 1



CIRCUIT 2

92-102259-08-01

RLNL SYSTEM CHARGE CHARTS

FIGURE 18

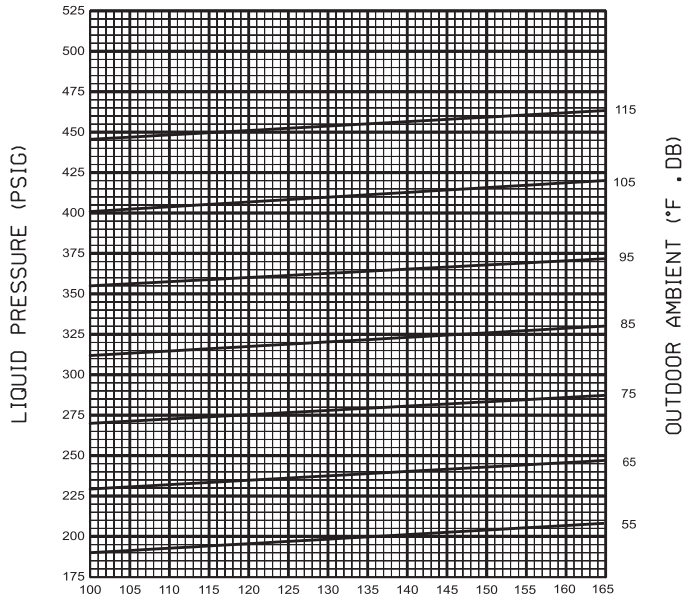
SYSTEM CHARGE CHART - REFRIGERANT 410A
8-1/2 TON, CIRCUITS 1 & 2

CAUTION:

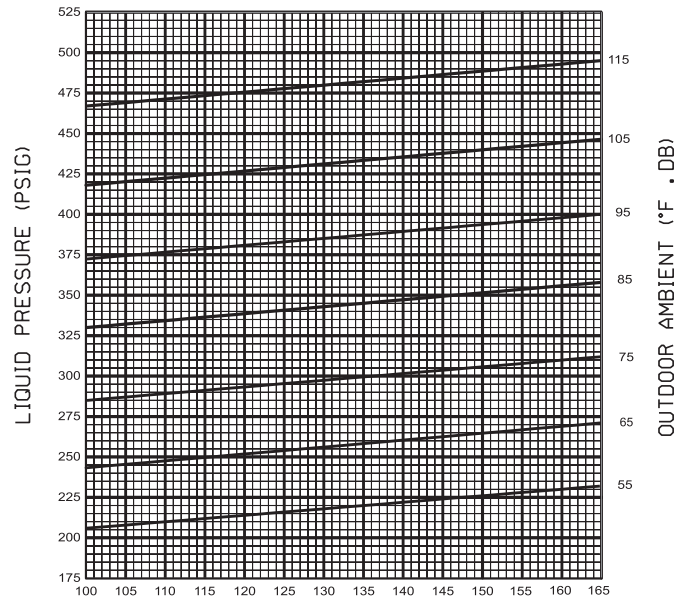
1. BOTH COMPRESSORS MUST BE OPERATING BEFORE CHECKING REFRIGERANT CHARGE.
2. RETURN AIR TEMPERATURE MUST BE WITHIN COMFORT CONDITIONS BEFORE FINAL REFRIGERANT CHECK!

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.



CIRCUIT 1



CIRCUIT 2

92-102259-09-01

RLNL SYSTEM CHARGE CHARTS

FIGURE 19

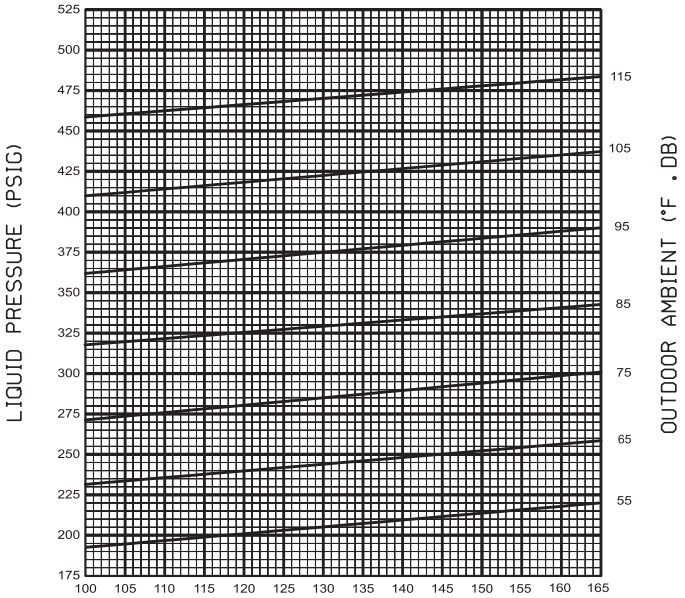
SYSTEM CHARGE CHART - REFRIGERANT 410A
10 TON, CIRCUITS 1 & 2

CAUTION:

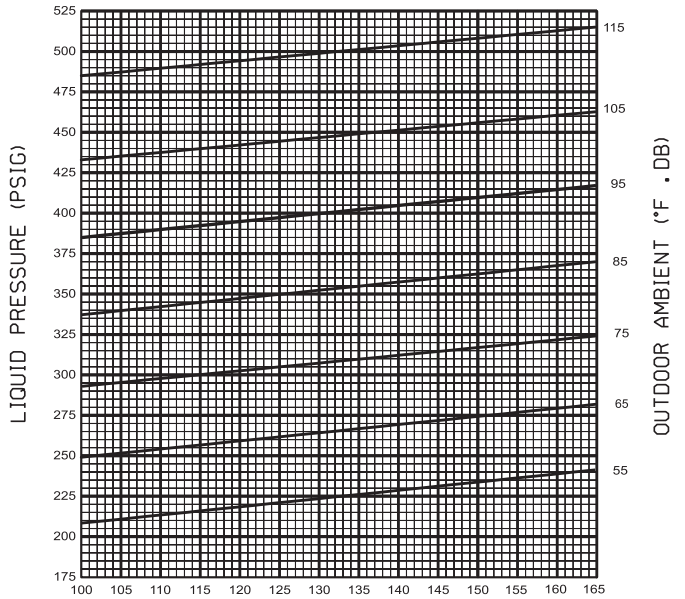
1. BOTH COMPRESSORS MUST BE OPERATING BEFORE CHECKING REFRIGERANT CHARGE.
2. RETURN AIR TEMPERATURE MUST BE WITHIN COMFORT CONDITIONS BEFORE FINAL REFRIGERANT CHECK!

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.



CIRCUIT 1



CIRCUIT 2

92-102259-10-01

RLNL SYSTEM CHARGE CHARTS

FIGURE 20

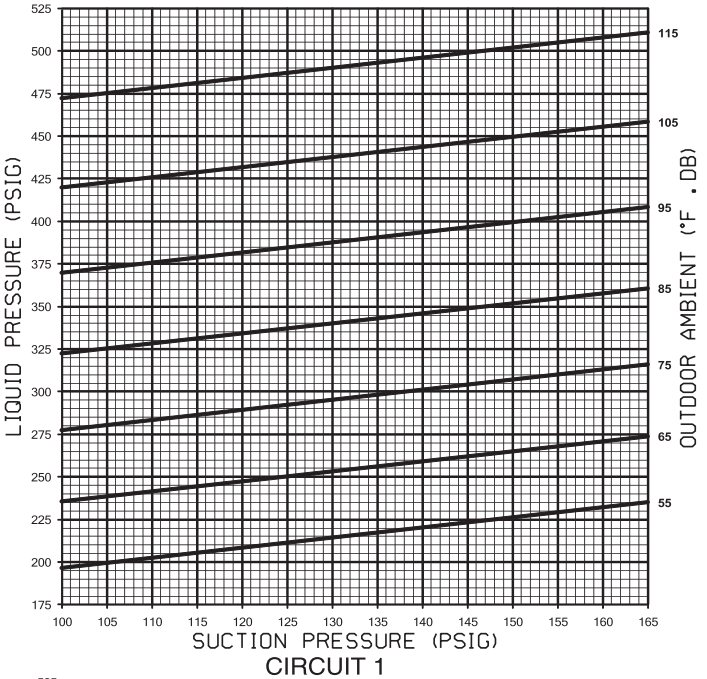
SYSTEM CHARGE CHART - REFRIGERANT 410A
12-1/2 TON, CIRCUITS 1 & 2

CAUTION:

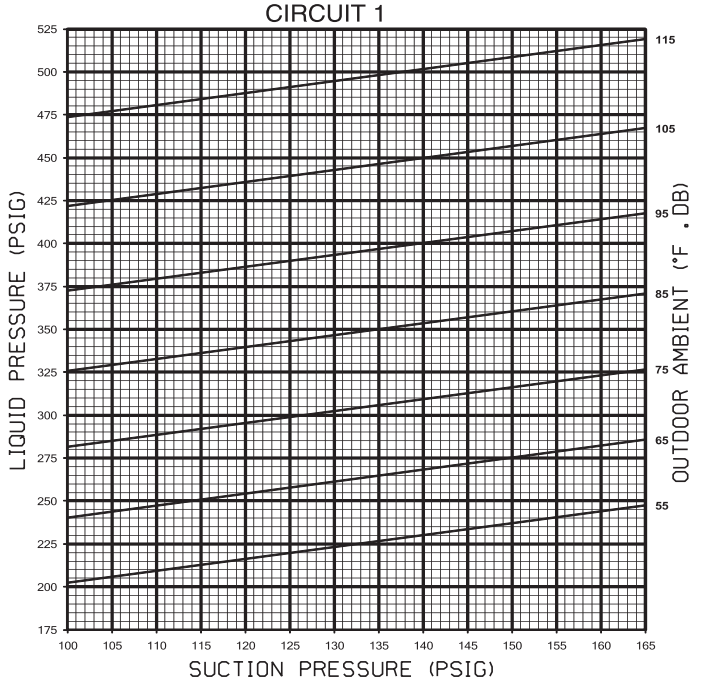
1. BOTH COMPRESSORS MUST BE OPERATING BEFORE CHECKING REFRIGERANT CHARGE.
2. RETURN AIR TEMPERATURE MUST BE WITHIN COMFORT CONDITIONS BEFORE FINAL REFRIGERANT CHECK!

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.



CIRCUIT 1



CIRCUIT 2

92-102259-29-00