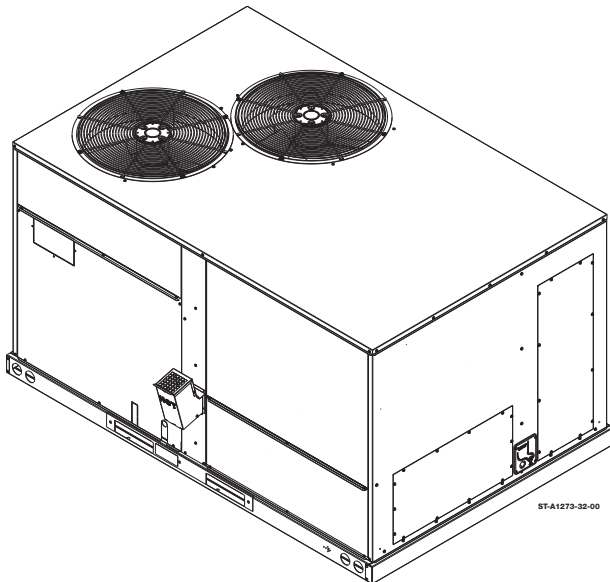


INSTALLATION INSTRUCTIONS

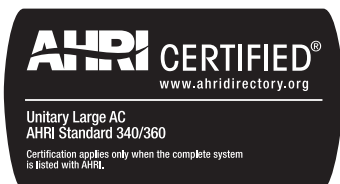
FOR PACKAGE GAS ELECTRIC UNITS

RGED SERIES 7.5, 8.5, 10.0 & 12.5 TON [26.4, 29.9, 35.2 & 44.0 KW]
60 HZ MODELS



**Featuring New Industry
Standard R-410A**

R-410A



RECOGNIZE THIS SYMBOL AS AN INDICATION OF IMPORTANT SAFETY INFORMATION!

▲ WARNING

IF THE INFORMATION IN THESE INSTRUCTIONS IS NOT FOLLOWED EXACTLY, A FIRE OR EXPLOSION MAY RESULT, CAUSING PROPERTY DAMAGE, PERSONAL INJURY OR DEATH.

▲ WARNING

THESE INSTRUCTIONS ARE INTENDED AS AN AID TO QUALIFIED 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, CARBON MONOXIDE POISONING, EXPLOSION, PROPERTY DAMAGE, PERSONAL INJURY OR DEATH.

▲ WARNING

PROPOSITION 65 WARNING: THIS PRODUCT CONTAINS CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

▲ WARNING

- Do not store or use gasoline or other flammable vapors and liquids, or other combustible materials in the vicinity of this or any other appliance.
- WHAT TO DO IF YOU SMELL GAS
 - Do not try to light any appliance.
 - Do not touch any electrical switch; do not use any phone in your building.
 - Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
 - If you cannot reach your gas supplier, call the fire department.
 - Do not return to your home until authorized by the gas supplier or fire department.
- DO NOT RELY ON SMELL ALONE TO DETECT LEAKS. DUE TO VARIOUS FACTORS, YOU MAY NOT BE ABLE TO SMELL FUEL GASES.
 - U.L. recognized fuel gas and CO detectors are recommended in all applications, and their installation should be in accordance with the manufacturer's recommendations and/or local laws, rules, regulations, or customs.
- Improper installation, adjustment, alteration, service or maintenance can cause injury, property damage or death. Refer to this manual. Installation and service must be performed by a qualified installer, service agency or the gas supplier. In the commonwealth of Massachusetts, installation must be performed by a licensed plumber or gas fitter for appropriate fuel.

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



▲ NOTICE

BREAK-IN PERIOD

PRIOR TO AGENCY TESTING, RUN THE COMPRESSOR FOR 16 HOURS AT 115°F OUTDOOR AMBIENT TEMPERATURE AND 80° DRY BULB/75° WET BULB INDOOR AMBIENT TEMPERATURE.

▲ NOTICE

EFFICIENCY TESTING NOTICE

FOR PURPOSES OF VERIFYING OR TESTING EFFICIENCY RATINGS, THE TEST PROCEDURE IN TITLE 10 PART 431 APPENDIX A TO SUBPART F (UNIFORM TEST METHOD FOR MEASURING THE ENERGY CONSUMPTION OF SMALL, LARGE, AND VERY LARGE COMMERCIAL PACKAGE AIR CONDITIONING AND HEATING EQUIPMENT), AND THE CLARIFYING PROVISIONS PROVIDED IN THE AHRI OPERATIONS FOR UNITARY LARGE EQUIPMENT 340/360, 365 THAT WERE APPLICABLE AT THE DATE OF MANUFACTURE SHOULD BE USED FOR TEST SET UP AND PERFORMANCE.

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 combination gas heating/electric cooling unit. There are some 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.

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. **IMPORTANT:** Check the unit model number, heating size, electrical characteristics, and accessories to determine if they are correct.

I. SPECIFICATIONS

A. GENERAL

The Combination Gas Heating/Electric Cooling Rooftop is available in 150,000, 205,000 and 225,000 BTUH heating input. Cooling capacity is 7.5, 8.5, 10, 12.5 nominal tons. Units are convertible from bottom supply and return to side supply and return by relocation of supply and return air cover panels. See cover installation detail.

The units are weatherized for mounting outside of the building.

▲ WARNING

UNITS ARE NOT DESIGN CERTIFIED TO BE INSTALLED INSIDE THE STRUCTURE. DOING SO CAN CAUSE INADEQUATE UNIT PERFORMANCE AS WELL AS PROPERTY DAMAGE AND CARBON MONOXIDE POISONING RESULTING IN PERSONAL INJURY OR DEATH.

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 energy consumption of the ignition system used with this unit is 175 watts.
2. 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 scroll compressor, condenser coil, evaporator coil with TXV, a circulation air blower, a condenser fan, a heat exchanger assembly, gas burner and control assembly, combustion air motor and 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. Specifications 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*

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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 PRESSURE THAN R-22 SYSTEMS. DO NOT USE R-22 SERVICE EQUIPMENT OR COMPONENTS ON R-410A EQUIPMENT.

SAFETY INFORMATION

▲ WARNING

USE ONLY WITH TYPE OF GAS APPROVED FOR THIS UNIT. REFER TO THE UNIT RATING PLATE.

▲ WARNING

INSTALL THIS UNIT ONLY IN A LOCATION AND POSITION AS SPECIFIED IN THE LOCATION REQUIREMENTS AND CONSIDERATIONS SECTION OF THESE INSTRUCTIONS. PROVIDE ADEQUATE COMBUSTION AND VENTILATION AIR TO THE UNIT SPACE AS SPECIFIED IN THE VENTING SECTION OF THESE INSTRUCTIONS.

▲ WARNING

PROVIDE ADEQUATE COMBUSTION AND VENTILATION AIR TO THE UNIT SPACE AS SPECIFIED IN THE COMBUSTION AND VENTILATION AIR SECTION OF THESE INSTRUCTIONS.

▲ WARNING

COMBUSTION PRODUCTS MUST BE DISCHARGED OUTDOORS. CONNECT THE FACTORY SUPPLIED EXHAUST AND COMBUSTION AIR INLET HOODS ONLY, AS SPECIFIED IN THE EXHAUST AND COMBUSTION AIR INLET HOODS INSTALLATION SECTION OF THESE INSTRUCTIONS.

▲ WARNING

NEVER TEST FOR GAS LEAKS WITH AN OPEN FLAME. USE A COMMERCIALY AVAILABLE SOAP SOLUTION MADE SPECIFICALLY FOR THE DETECTION OF LEAKS TO CHECK ALL CONNECTIONS, AS SPECIFIED IN GAS SUPPLY AND PIPING SECTION OF THESE INSTRUCTIONS.

▲ WARNING

ALWAYS INSTALL UNIT TO OPERATE WITHIN THE UNIT'S INTENDED TEMPERATURE-RISE RANGE WITH A DUCT SYSTEM WHICH HAS AN EXTERNAL STATIC PRESSURE WITHIN THE ALLOWABLE RANGE, AS SPECIFIED IN DUCTING SECTION OF THESE INSTRUCTIONS. SEE ALSO UNIT RATING PLATE.

▲ WARNING

WHEN A UNIT IS INSTALLED SO THAT SUPPLY DUCTS CARRY AIR CIRCULATED BY THE UNIT TO AREAS OUTSIDE THE SPACE CONTAINING THE UNIT, THE RETURN AIR SHALL ALSO BE HANDLED BY DUCT(S) SEALED TO THE UNIT CASING AND TERMINATING OUTSIDE THE SPACE CONTAINING THE UNIT.

▲ WARNING

THIS UNIT MAY BE USED TO HEAT THE BUILDING OR STRUCTURE DURING CONSTRUCTION IF THE FOLLOWING INSTALLATION REQUIREMENTS ARE MET. INSTALLATION MUST COMPLY WITH ALL INSTALLATION INSTRUCTIONS INCLUDING:

- PROPER VENT INSTALLATION;
- FURNACE OPERATING UNDER THERMOSTATIC CONTROL;
- RETURN AIR DUCT SEALED TO THE FURNACE;
- AIR FILTERS IN PLACE;
- SET FURNACE INPUT RATE AND TEMPERATURE RISE PER RATING PLATE MARKING;
- RETURN AIR TEMPERATURE MAINTAINED BETWEEN 55°F (13°C) AND 80°F (27°C); AND
- INSTALLATION OF EXHAUST AND COMBUSTION AIR INLET HOODS COMPLETED;
- CLEAN FURNACE, DUCT WORK AND COMPONENTS UPON SUBSTANTIAL COMPLETION OF THE CONSTRUCTION PROCESS, AND VERIFY FURNACE OPERATING CONDITIONS INCLUDING IGNITION INPUT RATE, TEMPERATURE RISE AND VENTING, ACCORDING TO THE INSTRUCTIONS.

Unit Dimensions

IMPORTANT: THIS UNIT MUST BE MOUNTED LEVEL IN BOTH DIRECTIONS TO ALLOW WATER TO DRAIN FROM THE CONDENSER SECTION AND CONDENSATE PAN.

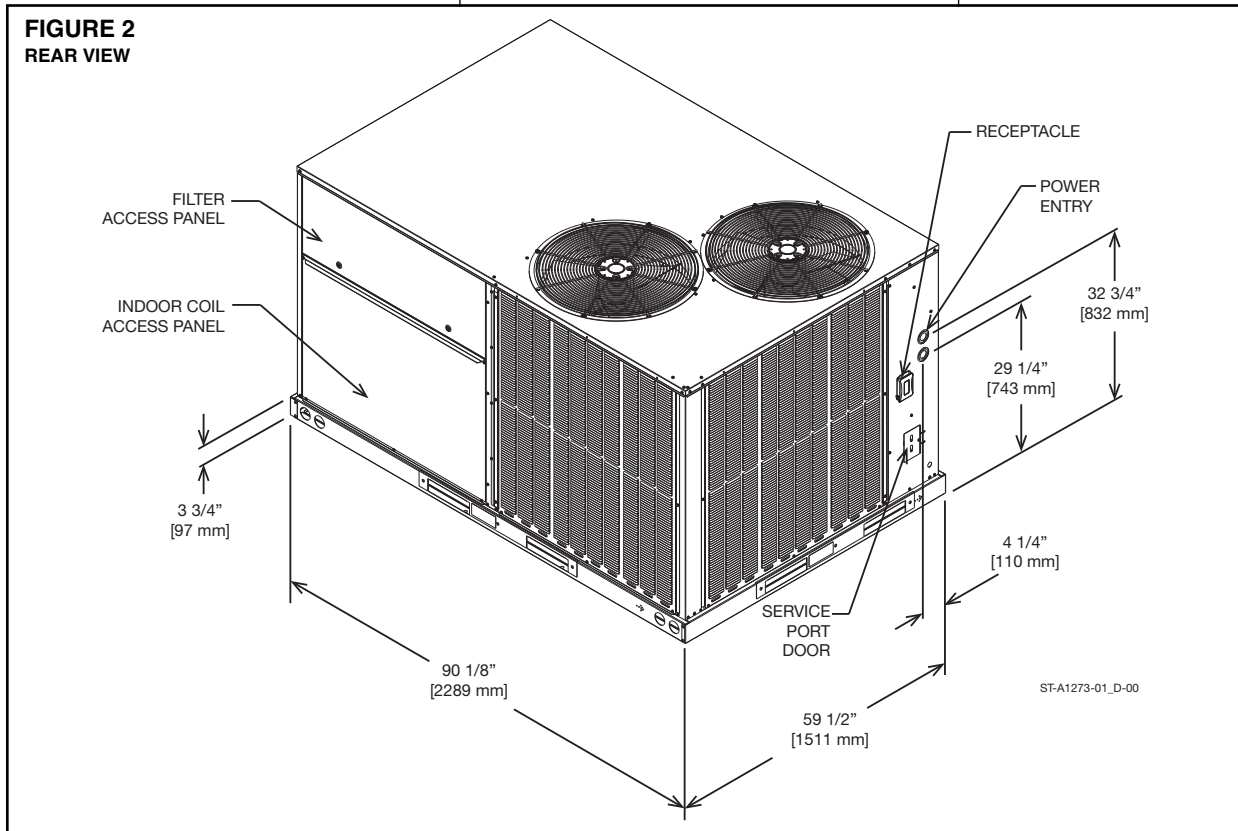
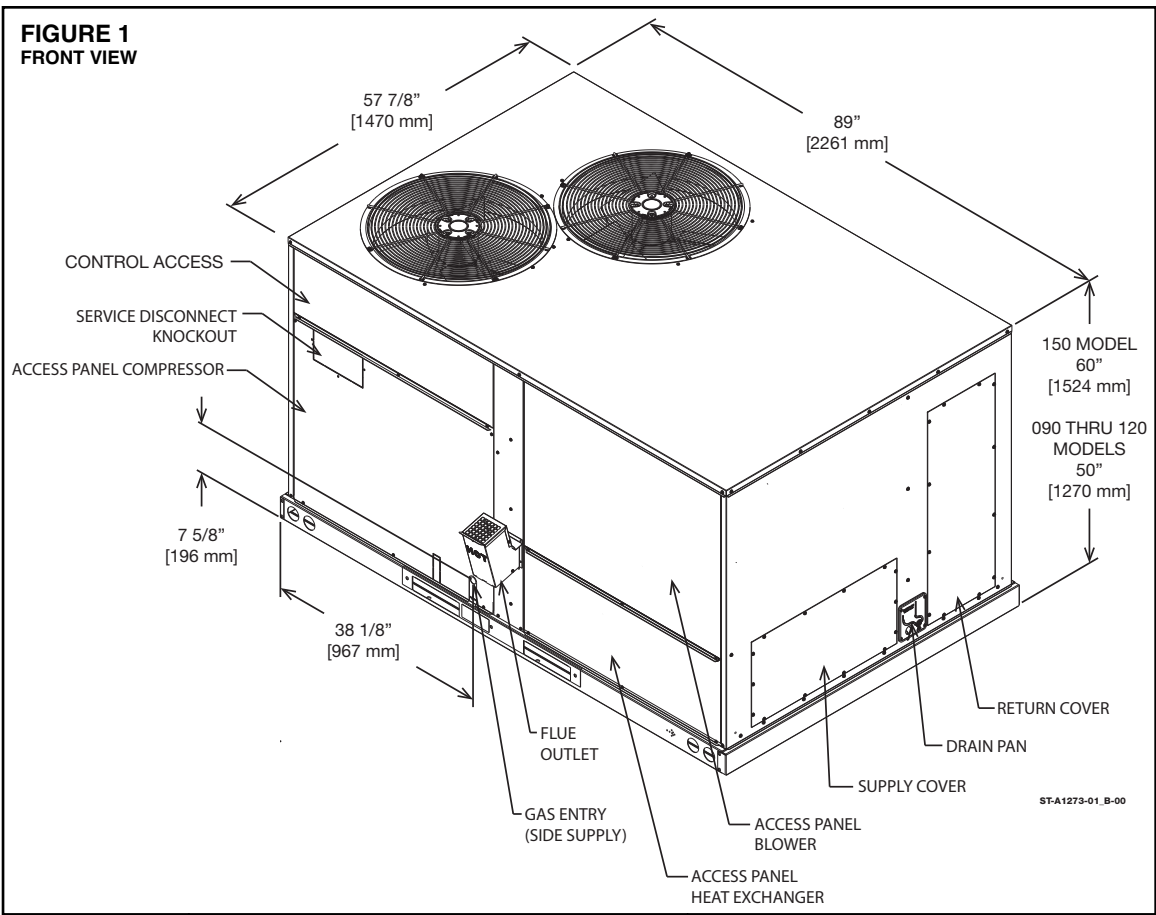


FIGURE 3
SUPPLY AND RETURN DIMENSIONS FOR DOWNFLOW APPLICATIONS

(VIEW FROM BOTTOM LOOKING UP)

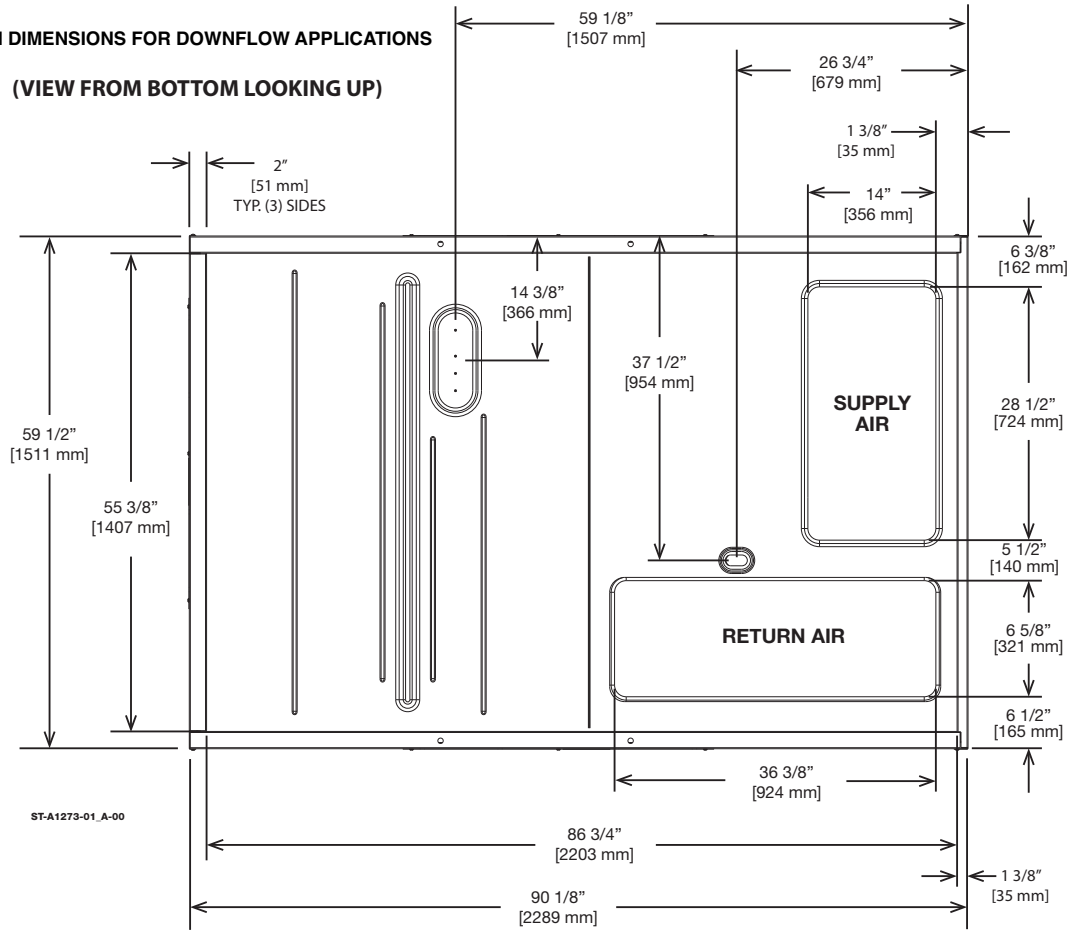


FIGURE 4
SUPPLY AND RETURN DIMENSIONS FOR HORIZONTAL APPLICATIONS

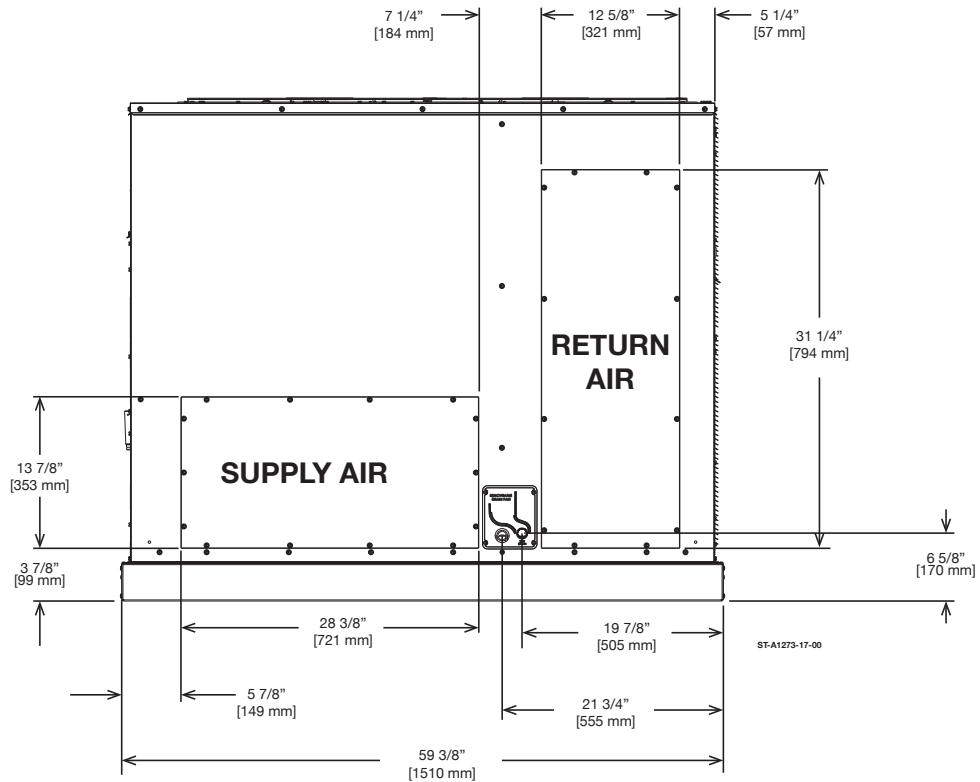
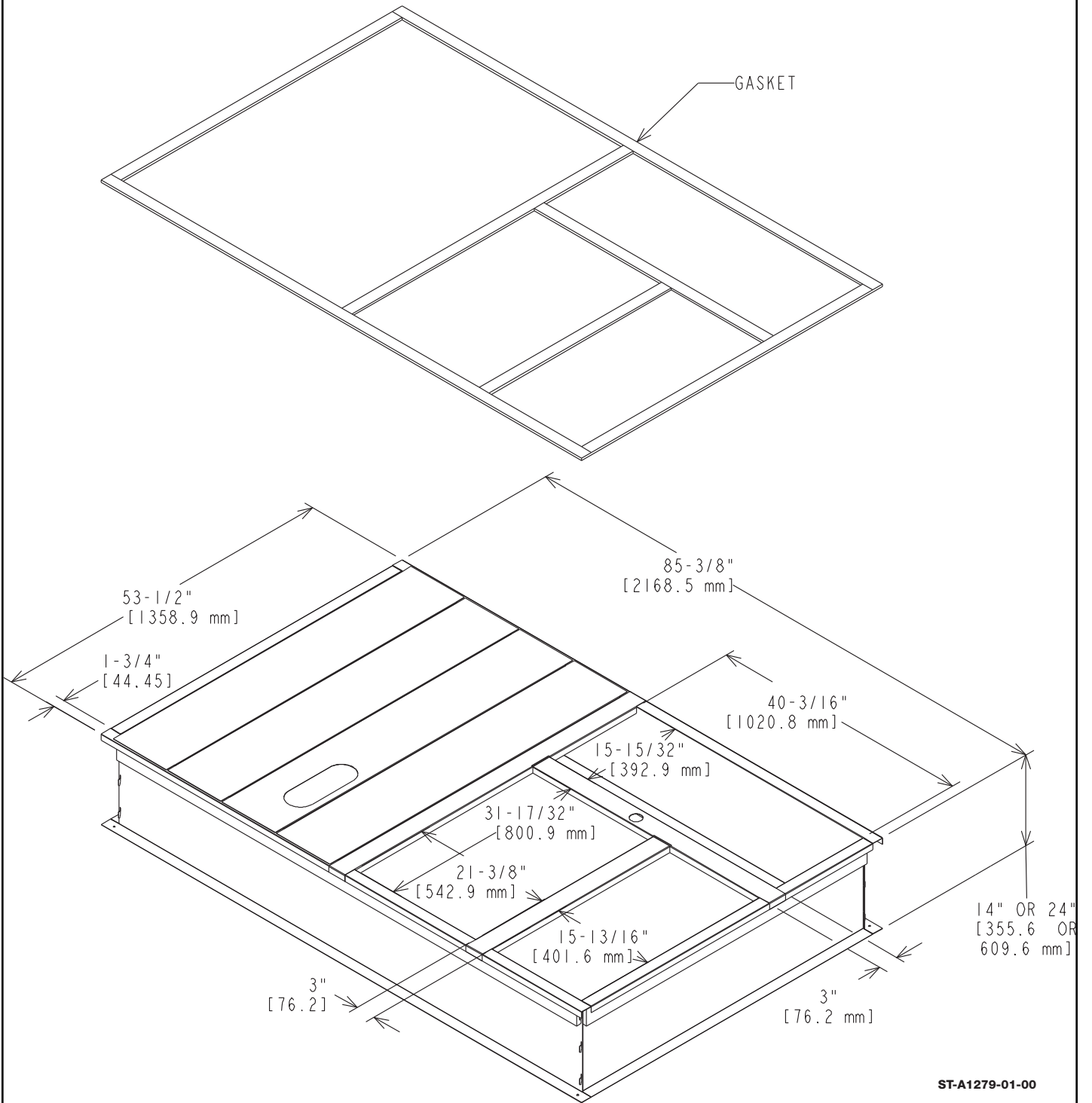


FIGURE 5
ROOFCURB INSTALLATION



GENERAL DATA - GEDZR MODELS

7.5-12.5 TON [26.4 - 44.0 kW]

| Model RGEDZR Series | ZR090A*****A | ZR102A*****A | ZR120A*****A |
|--|-------------------------|-------------------------|-------------------------|
| | ZR series | ZR series | ZR series |
| Cooling Performance¹ | | | |
| Gross Cooling Capacity Btu [kW] | 88,000 [25.78] | 99,000 [29.01] | 118,000 [34.57] |
| EER/SEER ² | 11/NA | 11/NA | 11/NA |
| Nominal CFM/AHRI Rated CFM [L/s] | 3000/3175 [1416/1498] | 3400/3200 [1604/1510] | 4000/3480 [1888/1642] |
| AHRI Net Cooling Capacity Btu [kW] | 85,000 [24.9] | 96,000 [28.13] | 114,000 [33.4] |
| Net Sensible Capacity Btu [kW] | 62,700 [18.37] | 68,300 [20.01] | 80,600 [23.62] |
| Net Latent Capacity Btu [kW] | 22,300 [6.53] | 27,700 [8.12] | 33,400 [9.79] |
| IEER ³ | 12.7 | 12.7 | 12.7 |
| Net System Power kW | 7.53 | 8.51 | 9.86 |
| Compressor | | | |
| No./Type | 1/Scroll | 1/Scroll | 1/Scroll |
| No. Stages | 1 | 1 | 1 |
| Outdoor Sound Rating (dB)⁵ | | | |
| | 88 | 88 | 88 |
| Outdoor Coil - Fin Type | | | |
| Tube Type | Louvered | Louvered | Louvered |
| Tube Type | MicroChannel | MicroChannel | MicroChannel |
| MicroChannel Depth in. [mm] | 0.71 [18] | 0.81 [20.6] | 1 [25.4] |
| Face Area sq. ft. [sq. m] | 25.4 [2.36] | 25.6 [2.38] | 25.6 [2.38] |
| Rows / FPI [FPcm] | 1 / 23 [9] | 1 / 23 [9] | 1 / 23 [9] |
| Indoor Coil - Fin Type | | | |
| Tube Type | Louvered | Louvered | Louvered |
| Tube Type | MicroChannel | MicroChannel | MicroChannel |
| MicroChannel Depth in. [mm] | 1 [25.4] | 1.26 [32] | 1.26 [32] |
| Face Area sq. ft. [sq. m] | 11 [1.02] | 10.9 [1.01] | 10.9 [1.01] |
| Rows / FPI [FPcm] | 1 / 20 [8] | 1 / 20 [8] | 1 / 20 [8] |
| Refrigerant Control | TX Valves | TX Valves | TX Valves |
| Drain Connection No./Size in. [mm] | 1/0.75 [19.05] | 1/0.75 [19.05] | 1/0.75 [19.05] |
| Outdoor Fan - Type | | | |
| Propeller | Propeller | Propeller | Propeller |
| No. Used/Diameter in. [mm] | 2/24 [609.6] | 2/24 [609.6] | 2/24 [609.6] |
| Drive Type/No. Speeds | Direct/1 | Direct/1 | Direct/1 |
| CFM [L/s] | 8000 [3775] | 8000 [3775] | 8500 [4011] |
| No. Motors/HP | 2 at 1/5 HP | 2 at 1/5 HP | 2 at 1/3 HP |
| Motor RPM | 820 | 820 | 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] |
| Drive Type | Belt (Adjustable) | Belt (Adjustable) | Belt (Adjustable) |
| No. Speeds | Single | Single | Single |
| No. Motors | 1 | 1 | 1 |
| Motor RPM | 1725 | 1725 | 1725 |
| Motor Frame Size | 56 | 56 | 56 |
| Filter - Type | | | |
| Disposable | Disposable | Disposable | Disposable |
| Furnished | Yes | Yes | Yes |
| (NO.) Size Recommended in. [mm x mm x mm] | (4)2x20x20 [51x508x508] | (4)2x20x20 [51x508x508] | (4)2x20x20 [51x508x508] |
| Refrigerant Charge Oz. [g] | | | |
| | 100 [2835] | 117 [3317] | 136 [3856] |
| Weights | | | |
| Net Weight lbs. [kg] | 839 [381] | 868 [394] | 896 [406] |
| Ship Weight lbs. [kg] | 878 [398] | 907 [411] | 935 [424] |

GENERAL DATA - GEDZS MODELS

7.5-12.5 TON [26.4 - 44.0 kW]

| Model RGEDZS Series | ZS090A*****A | ZS102A*****A | ZS120A*****A | ZS150A*****A |
|--|-------------------------|-------------------------|-------------------------|-------------------------|
| | ZS series | ZS series | ZS series | ZS series |
| Cooling Performance¹ | | | | |
| Gross Cooling Capacity Btu [kW] | 88,000 [25.78] | 99,000 [29.01] | 118,000 [34.57] | 148,000 [43.36] |
| EER/SEER ² | 11/NA | 11/NA | 11/NA | 10.8/NA |
| Nominal CFM/AHRI Rated CFM [L/s] | 3000/3175 [1416/1498] | 3400/3225 [1604/1522] | 4000/3480 [1888/1642] | 5000/3750 [2360/1770] |
| AHRI Net Cooling Capacity Btu [kW] | 85,000 [24.9] | 96,000 [28.13] | 114,000 [33.4] | 142,000 [41.61] |
| Net Sensible Capacity Btu [kW] | 62,700 [18.37] | 68,300 [20.01] | 79,600 [23.32] | 98,600 [28.89] |
| Net Latent Capacity Btu [kW] | 22,300 [6.53] | 27,700 [8.12] | 34,400 [10.08] | 43,400 [12.72] |
| IEER ³ | 12.7 | 12.7 | 12.7 | 12.2 |
| Net System Power kW | 7.35 | 7.35 | 9.83 | 13.69 |
| Compressor | | | | |
| No./Type | 1/Scroll | 1/Scroll | 1/Scroll | 2/Tandem Scroll |
| No. Stages | 2 | 2 | 2 | 2 |
| Outdoor Sound Rating (dB)⁵ | | | | |
| | 88 | 88 | 88 | 88 |
| Outdoor Coil - Fin Type | | | | |
| Tube Type | Louvered | Louvered | Louvered | Louvered |
| MicroChannel Depth in. [mm] | MicroChannel | MicroChannel | MicroChannel | MicroChannel |
| Face Area sq. ft. [sq. m] | 0.71 [18] | 0.81 [20.6] | 1 [25.4] | 1 [25.4] |
| Rows / FPI [FPcm] | 25.4 [2.36] | 25.6 [2.38] | 25.6 [2.38] | 31.5 [2.93] |
| | 1 / 23 [9] | 1 / 23 [9] | 1 / 23 [9] | 1 / 23 [9] |
| Indoor Coil - Fin Type | | | | |
| Tube Type | Louvered | Louvered | Louvered | Louvered |
| MicroChannel Depth in. [mm] | MicroChannel | MicroChannel | MicroChannel | MicroChannel |
| Face Area sq. ft. [sq. m] | 1 [25.4] | 1.26 [32] | 1.26 [32] | 1 [25.4] |
| Rows / FPI [FPcm] | 11 [1.02] | 10.9 [1.01] | 10.9 [1.01] | 13.8 [1.28] |
| | 1 / 20 [8] | 1 / 20 [8] | 1 / 20 [8] | 2 / 18 [7] |
| Refrigerant Control | TX Valves | TX Valves | TX Valves | TX Valves |
| Drain Connection No./Size in. [mm] | 1/0.75 [19.05] | 1/0.75 [19.05] | 1/0.75 [19.05] | 1/0.5 [12.7] |
| Outdoor Fan - Type | | | | |
| No. Used/Diameter in. [mm] | Propeller | Propeller | Propeller | Propeller |
| Drive Type/No. Speeds | 2/24 [609.6] | 2/24 [609.6] | 2/24 [609.6] | 2/24 [609.6] |
| CFM [L/s] | Direct/1 | Direct/1 | Direct/1 | Direct/1 |
| No. Motors/HP | 8000 [3775] | 8000 [3775] | 8500 [4011] | 9000 [4247] |
| Motor RPM | 2 at 1/5 HP | 2 at 1/5 HP | 2 at 1/3 HP | 2 at 3/4 HP |
| | 820 | 820 | 1075 | 1100 |
| Indoor Fan - Type | | | | |
| No. Used/Diameter in. [mm] | FC Centrifugal | FC Centrifugal | FC Centrifugal | FC Centrifugal |
| Drive Type | 1/15x15 [381x381] | 1/15x15 [381x381] | 1/15x15 [381x381] | 1/15x15 [381x381] |
| No. Speeds | Belt (Adjustable) | Belt (Adjustable) | Belt (Adjustable) | Belt (Adjustable) |
| No. Motors | Single | Single | Single | Single |
| Motor RPM | 1 | 1 | 1 | 1 |
| Motor Frame Size | 1725 | 1725 | 1725 | 1725 |
| | 56 | 56 | 56 | 56 |
| Filter - Type | | | | |
| Furnished | Disposable | Disposable | Disposable | Disposable |
| (NO.) Size Recommended in. [mm x mm x mm] | Yes | Yes | Yes | Yes |
| | (4)2x20x20 [51x508x508] | (4)2x20x20 [51x508x508] | (4)2x20x20 [51x508x508] | (4)2x20x25 [51x508x635] |
| Refrigerant Charge Oz. [g] | | | | |
| | 100 [2835] | 122 [3458] | 136 [3856] | 186 [5273] |
| Weights | | | | |
| Net Weight lbs. [kg] | 839 [381] | 868 [394] | 896 [406] | 1094 [496] |
| Ship Weight lbs. [kg] | 878 [398] | 907 [411] | 935 [424] | 1133 [514] |

GENERAL DATA - GEDZT MODELS

7.5-12.5 TON [26.4 - 44.0 kW]

| Model RGEDZT Series | ZT090A*****A | ZT102A*****A | ZT120A*****A | ZT150A*****A |
|--|-------------------------|-------------------------|-------------------------|-------------------------|
| | ZT series | ZT series | ZT series | ZT series |
| Cooling Performance¹ | | | | |
| Gross Cooling Capacity Btu [kW] | 88,000 [25.78] | 99,000 [29.01] | 118,000 [34.57] | 148,000 [43.36] |
| EER/SEER ² | 11/NA | 11/NA | 11/NA | 10.8/NA |
| Nominal CFM/AHRI Rated CFM [L/s] | 3000/3175 [1416/1498] | 3400/3225 [1604/1522] | 4000/3480 [1888/1642] | 5000/3750 [2360/1770] |
| AHRI Net Cooling Capacity Btu [kW] | 85,000 [24.9] | 96,000 [28.13] | 114,000 [33.4] | 142,000 [41.61] |
| Net Sensible Capacity Btu [kW] | 62,700 [18.37] | 68,300 [20.01] | 79,600 [23.32] | 98,600 [28.89] |
| Net Latent Capacity Btu [kW] | 22,300 [6.53] | 27,700 [8.12] | 34,400 [10.08] | 43,400 [12.72] |
| IEER ³ | 14.6 | 14.6 | 14.6 | 14 |
| Net System Power kW | 7.35 | 7.35 | 9.83 | 13.69 |
| Compressor | | | | |
| No./Type | 1/Scroll | 1/Scroll | 1/Scroll | 2/Tandem Scroll |
| No. Stages | 2 | 2 | 2 | 2 |
| Outdoor Sound Rating (dB)⁵ | | | | |
| | 88 | 88 | 88 | 88 |
| Outdoor Coil - Fin Type | | | | |
| Tube Type | Louvered | Louvered | Louvered | Louvered |
| MicroChannel Depth in. [mm] | MicroChannel | MicroChannel | MicroChannel | MicroChannel |
| Face Area sq. ft. [sq. m] | 0.71 [18] | 0.81 [20.6] | 1 [25.4] | 1 [25.4] |
| Rows / FPI [FPcm] | 25.4 [2.36] | 25.6 [2.38] | 25.6 [2.38] | 31.5 [2.93] |
| | 1 / 23 [9] | 1 / 23 [9] | 1 / 23 [9] | 1 / 23 [9] |
| Indoor Coil - Fin Type | | | | |
| Tube Type | Louvered | Louvered | Louvered | Louvered |
| MicroChannel Depth in. [mm] | MicroChannel | MicroChannel | MicroChannel | MicroChannel |
| Face Area sq. ft. [sq. m] | 1 [25.4] | 1.26 [32] | 1.26 [32] | 1 [25.4] |
| Rows / FPI [FPcm] | 11 [1.02] | 10.9 [1.01] | 10.9 [1.01] | 13.8 [1.28] |
| | 1 / 20 [8] | 1 / 20 [8] | 1 / 20 [8] | 2 / 18 [7] |
| Refrigerant Control | TX Valves | TX Valves | TX Valves | TX Valves |
| Drain Connection No./Size in. [mm] | 1/0.75 [19.05] | 1/0.75 [19.05] | 1/0.75 [19.05] | 1/0.5 [12.7] |
| Outdoor Fan - Type | | | | |
| Propeller | 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] | 8500 [4011] | 9000 [4247] |
| No. Motors/HP | 2 at 1/5 HP | 2 at 1/5 HP | 2 at 1/3 HP | 2 at 3/4 HP |
| Motor RPM | 820 | 820 | 1075 | 1100 |
| Indoor Fan - Type | | | | |
| FC Centrifugal | 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 | Single |
| No. Motors | 1 | 1 | 1 | 1 |
| Motor RPM | 1725 | 1725 | 1725 | 1725 |
| Motor Frame Size | 56 | 56 | 56 | 184 |
| Filter - Type | | | | |
| Disposable | Disposable | Disposable | Disposable | Disposable |
| Furnished | Yes | Yes | Yes | Yes |
| (NO.) Size Recommended in. [mm x mm x mm] | (4)2x20x20 [51x508x508] | (4)2x20x20 [51x508x508] | (4)2x20x20 [51x508x508] | (4)2x20x25 [51x508x635] |
| Refrigerant Charge Oz. [g] | | | | |
| | 100 [2835] | 122 [3458] | 136 [3856] | 186 [5273] |
| Weights | | | | |
| Net Weight lbs. [kg] | 839 [381] | 868 [394] | 896 [406] | 1094 [496] |
| Ship Weight lbs. [kg] | 878 [398] | 907 [411] | 935 [424] | 1133 [514] |

HEATING PERFORMANCE - GED MODELS

7.5-12.5 TON [26.4 - 44.0 kW]

| Model RGED** | Heating Input BTU [kW] (1 st Stage / 2 nd Stage) | Heating Output Btu [kW] (1 st Stage / 2 nd Stage) | Temperature Rise Range °F [°C] (1 st Stage / 2 nd Stage) | Steady State Efficiency (%) | No. Burners | No. Stages | Gas Connection Pipe Size in. [mm] |
|--------------------|---|--|---|-----------------------------|-------------|------------|-----------------------------------|
| 090A**15**A | 105,000/150,000 [30.76/43.95] | 85,050/121,500 [24.92/35.6] | 10-40 [5.6-22.2] / 25-55 [13.9-30.6] | 81 | 6 | 2 | 0.75 [19] |
| 090A**20**A | 143,500 / 205,000 [42.06/60.08] | 116,200 / 166,000 [34.07/48.66] | 20-50 [11.1-27.8] / 35-65 [19.4-36.1] | 81 | 9 | 2 | 0.75 [19] |
| 102A**15**A | 105,000/150,000 [30.76/43.95] | 85,050/121,500 [24.92/35.6] | 5-35 [2.8-19.4] / 15-45 [8.3-25] | 81 | 6 | 2 | 0.75 [19] |
| 102A**22**A | 157,500 / 225,000 [46.16/64.94] | 127,500 / 182,250 [37.39/53.41] | 15-45 [8.3-25] / 35-65 [19.4-36.1] | 81 | 9 | 2 | 0.75 [19] |
| 120A**15**A | 105,000/150,000 [30.76/43.95] | 85,050/121,500 [24.92/35.6] | 10-40 [5.6-22.2] / 20-50 [11.1-27.8] | 81 | 6 | 2 | 0.75 [19] |
| 120A**22**A | 157,500 / 225,000 [46.16/64.94] | 127,500 / 182,250 [37.39/53.41] | 15-45 [8.3-25] / 35-65 [19.4-36.1] | 81 | 9 | 2 | 0.75 [19] |
| 150A**15**A | 105,000/150,000 [30.76/43.95] | 85,050 / 121,500 [24.92/35.6] | 5-35 [2.8-19.4] / 15-45 [8.3-25] | 81 | 6 | 2 | 0.75 [19] |
| 150A**22**A | 157,500 / 225,000 [46.16/64.94] | 127,500 / 182,250 [37.39/53.41] | 10-40 [5.6-22.2] / 25-55 [13.9-30.6] | 81 | 9 | 2 | 0.75 [19] |

ELECTRICAL DATA - GEDZR MODELS

| ELECTRICAL DATA - -GEDZR SERIES | | | | | | | |
|---------------------------------|--|----------------------|--|----------------------|--|----------------------|--|
| | | 090ACA15 090ACA20 | 090ACB15 090ACC15 090ACC20 090ACB20 | 090ADA15 090ADA20 | 090ADB15 090ADB20 090ADC15 090ADC20 | 090AYA15 090AYA20 | 090AYB15 090AYB20 090AYC15 090AYC20 |
| Unit Information | Unit Operating Voltage Range | 187-253 | 187-253 | 414-506 | 414-506 | 517-633 | 517-633 |
| | Volts | 208/230 | 208/230 | 460 | 460 | 575 | 575 |
| | Phase | 3 | 3 | 3 | 3 | 3 | 3 |
| | Hz | 60 | 60 | 60 | 60 | 60 | 60 |
| | Minimum Circuit Ampacity | 41 | 43 | 21 | 23 | 16 | 17 |
| | Minimum Overcurrent Protection Device Size | 50 | 50 | 25 | 30 | 20 | 20 |
| | Maximum Overcurrent Protection Device Size | 60 | 60 | 30 | 35 | 25 | 25 |
| Compressor Motor | No. | 1 | 1 | 1 | 1 | 1 | 1 |
| | 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 | 7 | 7 | 7 | 7 | 7 | 7 |
| | Amps (RLA), Comp. 1 | 25 | 25 | 12.8 | 12.8 | 9.6 | 9.6 |
| | Amps (LRA), Comp. 1 | 164 | 164 | 100 | 100 | 78 | 78 |
| | HP, Compressor 2 | | | | | | |
| | Amps (RLA), Comp. 2 | | | | | | |
| | Amps (LRA), Comp. 2 | | | | | | |
| 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 | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 |
| | Amps (FLA, each) | 1.2 | 1.2 | 0.8 | 0.8 | 0.6 | 0.6 |
| | Amps (LRA, each) | 2.3 | 2.3 | 1.4 | 1.4 | 1.1 | 1.1 |
| 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 | 2 | 3 | 2 | 3 | 2 | 2 |
| | Amps (FLA, each) | 6.6 | 9.1 | 3.3 | 4.6 | 2.5 | 3.5 |
| | Amps (LRA, each) | 47 | 74.5 | 22.5 | 38.1 | 19 | 20 |

ELECTRICAL DATA - GEDZR MODELS

| ELECTRICAL DATA - -GEDZR SERIES | | | | | | | | | |
|---------------------------------|--|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|--|
| | | 102ACA15 102ACA22 | 102ACB15 102ACB22 | 102ACC15 102ACC22 | 102ADA15 102ADA22 | 102ADB15 102ADB22 | 102ADC15 102ADC22 | 102AYA15 102AYA22 | 102AYB15 102AYB22 102AYC15 102AYC22 |
| Unit Information | Unit Operating Voltage Range | 187-253 | 187-253 | 187-253 | 414-506 | 414-506 | 414-506 | 517-633 | 517-633 |
| | Volts | 208/230 | 208/230 | 208/230 | 460 | 460 | 460 | 575 | 575 |
| | Phase | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | Hz | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 |
| | Minimum Circuit Ampacity | 44 | 46 | 49 | 22 | 23 | 24 | 16 | 17 |
| | Minimum Overcurrent Protection Device Size | 60 | 60 | 60 | 25 | 30 | 30 | 20 | 20 |
| | Maximum Overcurrent Protection Device Size | 70 | 70 | 70 | 30 | 35 | 35 | 25 | 25 |
| Compressor Motor | No. | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | Volts | 208/230 | 208/230 | 208/230 | 460 | 460 | 460 | 575 | 575 |
| | Phase | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | RPM | 3450 | 3450 | 3450 | 3450 | 3450 | 3450 | 3450 | 3450 |
| | HP, Compressor 1 | 7 1/2 | 7 1/2 | 7 1/2 | 7 1/2 | 7 1/2 | 7 1/2 | 7 1/2 | 7 1/2 |
| | Amps (RLA), Comp. 1 | 27.6 | 27.6 | 27.6 | 12.8 | 12.8 | 12.8 | 9.6 | 9.6 |
| | Amps (LRA), Comp. 1 | 191 | 191 | 191 | 100 | 100 | 100 | 78 | 78 |
| | HP, Compressor 2 | | | | | | | | |
| | Amps (RLA), Comp. 2 | | | | | | | | |
| | Amps (LRA), Comp. 2 | | | | | | | | |
| Condenser Motor | No. | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | Volts | 208/230 | 208/230 | 208/230 | 460 | 460 | 460 | 575 | 575 |
| | Phase | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | HP | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 |
| | Amps (FLA, each) | 1.2 | 1.2 | 1.2 | 0.8 | 0.8 | 0.8 | 0.6 | 0.6 |
| | Amps (LRA, each) | 2.3 | 2.3 | 2.3 | 1.4 | 1.4 | 1.4 | 1.1 | 1.1 |
| Evaporator Fan | No. | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | Volts | 208/230 | 208/230 | 208/230 | 460 | 460 | 460 | 575 | 575 |
| | Phase | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | HP | 2 | 3 | 3 | 2 | 3 | 3 | 2 | 3 |
| | Amps (FLA, each) | 7.1 | 9.1 | 12.0 | 3.5 | 4.6 | 6 | 2.5 | 3.5 |
| | Amps (LRA, each) | 45 | 74.5 | 74.5 | 22.5 | 38.1 | 38.1 | 19 | 20 |

ELECTRICAL DATA - GEDZR MODELS

| ELECTRICAL DATA - GEDZR SERIES | | | | | | | | | |
|--------------------------------|--|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|--|
| | | 120ACA15 120ACA22 | 120ACB15 120ACB22 | 120ACC15 120ACC22 | 120ADA15 120ADA22 | 120ADB15 120ADB22 | 120ADC15 120ADC22 | 120AYA15 120AYA22 | 120AYB15 120AYB22 120AYC15 120AYC22 |
| Unit Information | Unit Operating Voltage Range | 187-253 | 187-253 | 187-253 | 414-506 | 414-506 | 414-506 | 517-633 | 517-633 |
| | Volts | 208/230 | 208/230 | 208/230 | 460 | 460 | 460 | 575 | 575 |
| | Phase | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | Hz | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 |
| | Minimum Circuit Ampacity | 48 | 51 | 53 | 26 | 27 | 28 | 19 | 20 |
| | Minimum Overcurrent Protection Device Size | 60 | 60 | 60 | 30 | 30 | 35 | 25 | 25 |
| | Maximum Overcurrent Protection Device Size | 70 | 70 | 80 | 35 | 40 | 40 | 25 | 30 |
| Compressor Motor | No. | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | Volts | 208/230 | 208/230 | 208/230 | 460 | 460 | 460 | 575 | 575 |
| | Phase | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | RPM | 3450 | 3450 | 3450 | 3450 | 3450 | 3450 | 3450 | 3450 |
| | HP, Compressor 1 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| | Amps (RLA), Comp. 1 | 28.2 | 28.2 | 28.2 | 14.7 | 14.7 | 14.7 | 11.3 | 11.3 |
| | Amps (LRA), Comp. 1 | 239 | 239 | 239 | 130 | 130 | 130 | 93.7 | 93.7 |
| | HP, Compressor 2 | | | | | | | | |
| | Amps (RLA), Comp. 2 | | | | | | | | |
| | Amps (LRA), Comp. 2 | | | | | | | | |
| Condenser Motor | No. | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | Volts | 208/230 | 208/230 | 208/230 | 460 | 460 | 460 | 575 | 575 |
| | Phase | 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 |
| | Amps (FLA, each) | 2.4 | 2.4 | 2.4 | 1.4 | 1.4 | 1.4 | 1 | 1 |
| | Amps (LRA, each) | 4.7 | 4.7 | 4.7 | 2.4 | 2.4 | 2.4 | 1.6 | 1.6 |
| Evaporator Fan | No. | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | Volts | 208/230 | 208/230 | 208/230 | 460 | 460 | 460 | 575 | 575 |
| | Phase | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | HP | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 3 |
| | Amps (FLA, each) | 7.9 | 10.1 | 12 | 3.9 | 5 | 6 | 2.5 | 3.5 |
| | Amps (LRA, each) | 45 | 74.5 | 74.5 | 22.5 | 38.1 | 38.1 | 19 | 20 |

ELECTRICAL DATA - GEDZS MODELS

| ELECTRICAL DATA - -GEDZS SERIES | | | | | | | |
|---------------------------------|--|----------------------|--|----------------------|--|--|--|
| | | 090ACA15 090ACA20 | 090ACB15 090ACB20 090ACC15 090ACC20 | 090ACF15 090ACF20 | 090ACG15 090ACG20 090ACH15 090ACH20 | 090ADA15 090ADF15 090ADF20 090ADA20 | 090ADB15 090ADB20 090ADC15 090ADC20 090ADG15 090ADG20 090ADH15 090ADH20 |
| Unit Information | Unit Operating Voltage Range | 187-253 | 187-253 | 187-253 | 187-253 | 414-506 | 414-506 |
| | Volts | 208/230 | 208/230 | 208/230 | 208/230 | 460 | 460 |
| | Phase | 3 | 3 | 3 | 3 | 3 | 3 |
| | Hz | 60 | 60 | 60 | 60 | 60 | 60 |
| | Minimum Circuit Ampacity | 41 | 44 | 41 | 44 | 17 | 19 |
| | Minimum Overcurrent Protection Device Size | 50 | 50 | 50 | 50 | 20 | 25 |
| | Maximum Overcurrent Protection Device Size | 60 | 60 | 60 | 60 | 25 | 25 |
| Compressor Motor | No. | 1 | 1 | 1 | 1 | 1 | 1 |
| | Volts | 208/230 | 208/230 | 208/230 | 208/230 | 460 | 460 |
| | Phase | 3 | 3 | 3 | 3 | 3 | 3 |
| | RPM | 3450 | 3450 | 3450 | 3450 | 3450 | 3450 |
| | HP, Compressor 1 | 7 | 7 | 7 | 7 | 7 | 7 |
| | Amps (RLA), Comp. 1 | 25.3 | 25.3 | 25.3 | 25.3 | 9.6 | 9.6 |
| | Amps (LRA), Comp. 1 | 184 | 184 | 184 | 184 | 84 | 84 |
| | HP, Compressor 2 | | | | | | |
| | Amps (RLA), Comp. 2 | | | | | | |
| | Amps (LRA), Comp. 2 | | | | | | |
| Condenser Motor | No. | 2 | 2 | 2 | 2 | 2 | 2 |
| | Volts | 208/230 | 208/230 | 208/230 | 208/230 | 460 | 460 |
| | Phase | 1 | 1 | 1 | 1 | 1 | 1 |
| | HP | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 |
| | Amps (FLA, each) | 1.2 | 1.2 | 1.2 | 1.2 | 0.8 | 0.8 |
| | Amps (LRA, each) | 2.3 | 2.3 | 2.3 | 2.3 | 1.4 | 1.4 |
| Evaporator Fan | No. | 1 | 1 | 1 | 1 | 1 | 1 |
| | Volts | 208/230 | 208/230 | 208/230 | 208/230 | 460 | 460 |
| | Phase | 3 | 3 | 3 | 3 | 3 | 3 |
| | HP | 2 | 3 | 2 | 3 | 2 | 3 |
| | Amps (FLA, each) | 6.6 | 9.1 | 6.6 | 9.1 | 3.2 | 4.6 |
| | Amps (LRA, each) | 47 | 74.5 | 22.5 | 74.5 | 22.5 | 38.1 |

ELECTRICAL DATA - GEDZS MODELS

| ELECTRICAL DATA --GEDZS SERIES | | | | | | | |
|--------------------------------|--|--|--|--|--|--|--|
| | | 102ACA15 102ACF15 102ACF22 102ACA22 | 102ACB15 102ACB22 102ACG15 102ACG22 | 102ACC15 102ACC22 102ACH15 102ACH22 | 102ADA15 102ADA22 102ADF15 102ADF22 | 102ADB15 102ADB22 102ADG15 102ADG22 | 102ADC15 102ADC22 102ADH15 102ADH22 |
| Unit Information | Unit Operating Voltage Range | 187-253 | 187-253 | 187-253 | 414-506 | 414-506 | 414-506 |
| | Volts | 208/230 | 208/230 | 208/230 | 460 | 460 | 460 |
| | Phase | 3 | 3 | 3 | 3 | 3 | 3 |
| | Hz | 60 | 60 | 60 | 60 | 60 | 60 |
| | Minimum Circuit Ampacity | 46 | 48 | 51 | 21 | 22 | 24 |
| | Minimum Overcurrent Protection Device Size | 60 | 60 | 60 | 25 | 25 | 30 |
| | Maximum Overcurrent Protection Device Size | 70 | 70 | 70 | 30 | 30 | 35 |
| Compressor Motor | No. | 1 | 1 | 1 | 1 | 1 | 1 |
| | Volts | 208/230 | 208/230 | 208/230 | 460 | 460 | 460 |
| | Phase | 3 | 3 | 3 | 3 | 3 | 3 |
| | RPM | 3450 | 3450 | 3450 | 3450 | 3450 | 3450 |
| | HP, Compressor 1 | 7 1/2 | 7 1/2 | 7 1/2 | 7 1/2 | 7 1/2 | 7 1/2 |
| | Amps (RLA), Comp. 1 | 28.8 | 28.8 | 28.8 | 12.5 | 12.5 | 12.5 |
| | Amps (LRA), Comp. 1 | 191 | 191 | 191 | 100 | 100 | 100 |
| | HP, Compressor 2 | | | | | | |
| | Amps (RLA), Comp. 2 | | | | | | |
| | Amps (LRA), Comp. 2 | | | | | | |
| Condenser Motor | No. | 2 | 2 | 2 | 2 | 2 | 2 |
| | Volts | 208/230 | 208/230 | 208/230 | 460 | 460 | 460 |
| | Phase | 1 | 1 | 1 | 1 | 1 | 1 |
| | HP | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 |
| | Amps (FLA, each) | 1.2 | 1.2 | 1.2 | 0.8 | 0.8 | 0.8 |
| | Amps (LRA, each) | 2.3 | 2.3 | 2.3 | 1.4 | 1.4 | 1.4 |
| Evaporator Fan | No. | 1 | 1 | 1 | 1 | 1 | 1 |
| | Volts | 208/230 | 208/230 | 208/230 | 460 | 460 | 460 |
| | Phase | 3 | 3 | 3 | 3 | 3 | 3 |
| | HP | 2 | 3 | 3 | 2 | 3 | 3 |
| | Amps (FLA, each) | 7 | 9.1 | 12 | 3.5 | 4.6 | 6 |
| | Amps (LRA, each) | 45 | 74.5 | 74.5 | 22.5 | 38.1 | 38.1 |

ELECTRICAL DATA - GEDZS MODELS

| ELECTRICAL DATA - -GEDZS SERIES | | | | | | | |
|---------------------------------|--|--|--|--|--|--|--|
| | | 120ACA15 120ACA22 120ACF15 120ACF22 | 120ACB15 120ACB22 120ACG15 120ACG22 | 120ACC15 120ACC22 120ACH15 120ACH22 | 120ADA15 120ADA22 120ADF15 120ADF22 | 120ADB15 120ADB22 120ADG15 120ADG22 | 120ADC15 120ADC22 120ADH15 120ADH22 |
| Unit Information | Unit Operating Voltage Range | 187-253 | 187-253 | 187-253 | 414-506 | 414-506 | 414-506 |
| | Volts | 208/230 | 208/230 | 208/230 | 460 | 460 | 460 |
| | Phase | 3 | 3 | 3 | 3 | 3 | 3 |
| | Hz | 60 | 60 | 60 | 60 | 60 | 60 |
| | Minimum Circuit Ampacity | 54 | 56 | 58 | 26 | 27 | 28 |
| | Minimum Overcurrent Protection Device Size | 70 | 70 | 70 | 30 | 40 | 40 |
| | Maximum Overcurrent Protection Device Size | 80 | 80 | 90 | 40 | 40 | 40 |
| Compressor Motor | No. | 1 | 1 | 1 | 1 | 1 | 1 |
| | Volts | 208/230 | 208/230 | 208/230 | 460 | 460 | 460 |
| | Phase | 3 | 3 | 3 | 3 | 3 | 3 |
| | RPM | 3450 | 3450 | 3450 | 3450 | 3450 | 3450 |
| | HP, Compressor 1 | 10 | 10 | 10 | 10 | 10 | 10 |
| | Amps (RLA), Comp. 1 | 32.6 | 32.6 | 32.6 | 14.8 | 14.8 | 14.8 |
| | Amps (LRA), Comp. 1 | 240 | 240 | 240 | 130 | 130 | 130 |
| | HP, Compressor 2 | | | | | | |
| | Amps (RLA), Comp. 2 | | | | | | |
| | Amps (LRA), Comp. 2 | | | | | | |
| Condenser Motor | No. | 2 | 2 | 2 | 2 | 2 | 2 |
| | Volts | 208/230 | 208/230 | 208/230 | 460 | 460 | 460 |
| | Phase | 1 | 1 | 1 | 1 | 1 | 1 |
| | HP | 1/3 | 1/3 | 1/3 | 1/3 | 1/3 | 1/3 |
| | Amps (FLA, each) | 2.4 | 2.4 | 2.4 | 1.4 | 1.4 | 1.4 |
| | Amps (LRA, each) | 4.7 | 4.7 | 4.7 | 2.4 | 2.4 | 2.4 |
| Evaporator Fan | No. | 1 | 1 | 1 | 1 | 1 | 1 |
| | Volts | 208/230 | 208/230 | 208/230 | 460 | 460 | 460 |
| | Phase | 3 | 3 | 3 | 3 | 3 | 3 |
| | HP | 2 | 2 | 2 | 2 | 3 | 3 |
| | Amps (FLA, each) | 7.9 | 10.1 | 12 | 3.9 | 5.1 | 6 |
| | Amps (LRA, each) | 45 | 74.5 | 74.5 | 22.5 | 38.1 | 38.1 |

ELECTRICAL DATA - GEDZS MODELS

| ELECTRICAL DATA - -GEDZS SERIES | | | | | | | |
|---------------------------------|--|--|--|--|--|----------------------|----------------------|
| | | 150ACA15 150ACA22 150ACF15 150ACF22 | 150ACB15 150ACB22 150ACG15 150ACG22 | 150ADA15 150ADA22 150ADF15 150ADF22 | 150ADB15 150ADB22 150ADG15 150ADG22 | 150AYA15 150AYA22 | 150AYB15 150AYB22 |
| Unit Information | Unit Operating Voltage Range | 187-253 | 187-253 | 414-506 | 414-506 | 517-633 | 517-633 |
| | Volts | 208/230 | 208/230 | 460 | 460 | 575 | 575 |
| | Phase | 3 | 3 | 3 | 3 | 3 | 3 |
| | Hz | 60 | 60 | 60 | 60 | 60 | 60 |
| | Minimum Circuit Ampacity | 70 | 75 | 34 | 37 | 25 | 27 |
| | Minimum Overcurrent Protection Device Size | 80 | 90 | 40 | 40 | 30 | 30 |
| | Maximum Overcurrent Protection Device Size | 90 | 90 | 40 | 45 | 30 | 30 |
| 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 | 6 | 6 | 6 | 6 | 6 | 6 |
| | Amps (RLA), Comp. 1 | 22.4 | 22.4 | 10.6 | 10.6 | 7.7 | 7.7 |
| | Amps (LRA), Comp. 1 | 164 | 164 | 100 | 100 | 78 | 78 |
| | HP, Compressor 2 | 6 | 6 | 6 | 6 | 6 | 6 |
| | Amps (RLA), Comp. 2 | 22.4 | 22.4 | 10.6 | 10.6 | 7.7 | 7.7 |
| | Amps (LRA), Comp. 2 | 164 | 164 | 100 | 100 | 78 | 78 |
| 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 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| | Amps (FLA, each) | 4.2 | 4.2 | 2.3 | 2.3 | 1.6 | 1.6 |
| | Amps (LRA, each) | | | | | | |
| 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) | 10.4 | 16 | 5.2 | 8 | 4.4 | 5.9 |
| | Amps (LRA, each) | 74.5 | 82 | 38.1 | 41 | 20 | 38 |

ELECTRICAL DATA - GEDZT MODELS

| ELECTRICAL DATA - -GEDZT SERIES | | | | | |
|---------------------------------|--|----------------------|--|----------------------|--|
| | | 090ACF15 090ACF20 | 090ACG15 090ACG20 090ACH15 090ACH20 | 090ADF15 090ADF20 | 090ADG15 090ADG20 090ADH15 090ADH20 |
| Unit Information | Unit Operating Voltage Range | 187-253 | 187-253 | 414-506 | 414-506 |
| | Volts | 208/230 | 208/230 | 460 | 460 |
| | Phase | 3 | 3 | 3 | 3 |
| | Hz | 60 | 60 | 60 | 60 |
| | Minimum Circuit Ampacity | 41 | 44 | 17 | 19 |
| | Minimum Overcurrent Protection Device Size | 50 | 50 | 20 | 25 |
| | Maximum Overcurrent Protection Device Size | 60 | 60 | 25 | 25 |
| Compressor Motor | No. | 1 | 1 | 1 | 1 |
| | Volts | 208/230 | 208/230 | 460 | 460 |
| | Phase | 3 | 3 | 3 | 3 |
| | RPM | 3450 | 3450 | 3450 | 3450 |
| | HP, Compressor 1 | 7 | 7 | 7 | 7 |
| | Amps (RLA), Comp. 1 | 25.3 | 25.3 | 9.6 | 9.6 |
| | Amps (LRA), Comp. 1 | 184 | 184 | 84 | 84 |
| | HP, Compressor 2 | | | | |
| | Amps (RLA), Comp. 2 | | | | |
| | Amps (LRA), Comp. 2 | | | | |
| Condenser Motor | No. | 2 | 2 | 2 | 2 |
| | Volts | 208/230 | 208/230 | 460 | 460 |
| | Phase | 1 | 1 | 1 | 1 |
| | HP | 1/5 | 1/5 | 1/5 | 1/5 |
| | Amps (FLA, each) | 1.2 | 1.2 | 0.8 | 0.8 |
| | Amps (LRA, each) | 2.3 | 2.3 | 1.4 | 1.4 |
| Evaporator Fan | No. | 1 | 1 | 1 | 1 |
| | Volts | 208/230 | 208/230 | 460 | 460 |
| | Phase | 3 | 3 | 3 | 3 |
| | HP | 2 | 3 | 2 | 3 |
| | Amps (FLA, each) | 6.6 | 9.1 | 3.2 | 4.6 |
| | Amps (LRA, each) | 22.5 | 74.5 | 22.5 | 38.1 |

ELECTRICAL DATA - GEDZT MODELS

| ELECTRICAL DATA - -GEDZT SERIES | | | | | | | |
|---------------------------------|--|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| | | 102ACF15 102ACF22 | 102ACG15 102ACG22 | 102ACH15 102ACH22 | 102ADF15 102ADF22 | 102ADG15 102ADG22 | 102ADH15 102ADH22 |
| Unit Information | Unit Operating Voltage Range | 187-253 | 187-253 | 187-253 | 414-506 | 414-506 | 414-506 |
| | Volts | 208/230 | 208/230 | 208/230 | 460 | 460 | 460 |
| | Phase | 3 | 3 | 3 | 3 | 3 | 3 |
| | Hz | 60 | 60 | 60 | 60 | 60 | 60 |
| | Minimum Circuit Ampacity | 46 | 48 | 51 | 21 | 22 | 24 |
| | Minimum Overcurrent Protection Device Size | 60 | 60 | 60 | 25 | 25 | 30 |
| | Maximum Overcurrent Protection Device Size | 70 | 70 | 70 | 30 | 30 | 35 |
| Compressor Motor | No. | 1 | 1 | 1 | 1 | 1 | 1 |
| | Volts | 208/230 | 208/230 | 208/230 | 460 | 460 | 460 |
| | Phase | 3 | 3 | 3 | 3 | 3 | 3 |
| | RPM | 3450 | 3450 | 3450 | 3450 | 3450 | 3450 |
| | HP, Compressor 1 | 7 1/2 | 7 1/2 | 7 1/2 | 7 1/2 | 7 1/2 | 7 1/2 |
| | Amps (RLA), Comp. 1 | 28.8 | 28.8 | 28.8 | 12.5 | 12.5 | 12.5 |
| | Amps (LRA), Comp. 1 | 191 | 191 | 191 | 100 | 100 | 100 |
| | HP, Compressor 2 | | | | | | |
| | Amps (RLA), Comp. 2 | | | | | | |
| | Amps (LRA), Comp. 2 | | | | | | |
| Condenser Motor | No. | 2 | 2 | 2 | 2 | 2 | 2 |
| | Volts | 208/230 | 208/230 | 208/230 | 460 | 460 | 460 |
| | Phase | 1 | 1 | 1 | 1 | 1 | 1 |
| | HP | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 |
| | Amps (FLA, each) | 1.2 | 1.2 | 1.2 | 0.8 | 0.8 | 0.8 |
| | Amps (LRA, each) | 2.3 | 2.3 | 2.3 | 1.4 | 1.4 | 1.4 |
| Evaporator Fan | No. | 1 | 1 | 1 | 1 | 1 | 1 |
| | Volts | 208/230 | 208/230 | 208/230 | 460 | 460 | 460 |
| | Phase | 3 | 3 | 3 | 3 | 3 | 3 |
| | HP | 2 | 3 | 3 | 2 | 3 | 3 |
| | Amps (FLA, each) | 7 | 9.1 | 12 | 3.5 | 4.6 | 6 |
| | Amps (LRA, each) | 45 | 74.5 | 74.5 | 22.5 | 38.1 | 38.1 |

ELECTRICAL DATA - GEDZT MODELS

| ELECTRICAL DATA - -GEDZT SERIES | | | | | | | |
|---------------------------------|--|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| | | 120ACF15 120ACF22 | 120ACG15 120ACG22 | 120ACH15 120ACH22 | 120ADF15 120ADF22 | 120ADG15 120ADG22 | 120ADH15 120ADH22 |
| Unit Information | Unit Operating Voltage Range | 187-253 | 187-253 | 187-253 | 414-506 | 414-506 | 414-506 |
| | Volts | 208/230 | 208/230 | 208/230 | 460 | 460 | 460 |
| | Phase | 3 | 3 | 3 | 3 | 3 | 3 |
| | Hz | 60 | 60 | 60 | 60 | 60 | 60 |
| | Minimum Circuit Ampacity | 54 | 56 | 58 | 26 | 27 | 28 |
| | Minimum Overcurrent Protection Device Size | 70 | 70 | 70 | 30 | 35 | 35 |
| | Maximum Overcurrent Protection Device Size | 80 | 80 | 90 | 40 | 40 | 40 |
| Compressor Motor | No. | 1 | 1 | 1 | 1 | 1 | 1 |
| | Volts | 208/230 | 208/230 | 208/230 | 460 | 460 | 460 |
| | Phase | 3 | 3 | 3 | 3 | 3 | 3 |
| | RPM | 3450 | 3450 | 3450 | 3450 | 3450 | 3450 |
| | HP, Compressor 1 | 10 | 10 | 10 | 10 | 10 | 10 |
| | Amps (RLA), Comp. 1 | 32.6 | 32.6 | 32.6 | 14.8 | 14.8 | 14.8 |
| | Amps (LRA), Comp. 1 | 240 | 240 | 240 | 130 | 130 | 130 |
| | HP, Compressor 2 | | | | | | |
| | Amps (RLA), Comp. 2 | | | | | | |
| | Amps (LRA), Comp. 2 | | | | | | |
| Condenser Motor | No. | 2 | 2 | 2 | 2 | 2 | 2 |
| | Volts | 208/230 | 208/230 | 208/230 | 460 | 460 | 460 |
| | Phase | 1 | 1 | 1 | 1 | 1 | 1 |
| | HP | 1/3 | 1/3 | 1/3 | 1/3 | 1/3 | 1/3 |
| | Amps (FLA, each) | 2.4 | 2.4 | 2.4 | 1.4 | 1.4 | 1.4 |
| | Amps (LRA, each) | 4.7 | 4.7 | 4.7 | 2.4 | 2.4 | 2.4 |
| Evaporator Fan | No. | 1 | 1 | 1 | 1 | 1 | 1 |
| | Volts | 208/230 | 208/230 | 208/230 | 460 | 460 | 460 |
| | Phase | 3 | 3 | 3 | 3 | 3 | 3 |
| | HP | 2 | 2 | 2 | 2 | 3 | 3 |
| | Amps (FLA, each) | 7.9 | 10.1 | 12 | 3.9 | 5.1 | 6 |
| | Amps (LRA, each) | 45 | 74.5 | 74.5 | 22.5 | 38.1 | 38.1 |

ELECTRICAL DATA - GEDZT MODELS

| ELECTRICAL DATA - -GEDZT SERIES | | | | | |
|---------------------------------|--|----------------------|----------------------|----------------------|----------------------|
| | | 150ACF15 150ACF22 | 150ACG15 150ACG22 | 150ADF22 150ACG22 | 150ADG15 150ADG22 |
| Unit Information | Unit Operating Voltage Range | 187-253 | 187-253 | 414-506 | 414-506 |
| | Volts | 208/230 | 208/230 | 460 | 460 |
| | Phase | 3 | 3 | 3 | 3 |
| | Hz | 60 | 60 | 60 | 60 |
| | Minimum Circuit Ampacity | 70 | 75 | 34 | 37 |
| | Minimum Overcurrent Protection Device Size | 80 | 80 | 35 | 40 |
| | Maximum Overcurrent Protection Device Size | 90 | 90 | 40 | 45 |
| Compressor Motor | No. | 2 | 2 | 2 | 2 |
| | Volts | 208/230 | 208/230 | 460 | 460 |
| | Phase | 3 | 3 | 3 | 3 |
| | RPM | 3450 | 3450 | 3450 | 3450 |
| | HP, Compressor 1 | 6 | 6 | 6 | 6 |
| | Amps (RLA), Comp. 1 | 22.4 | 22.4 | 10.6 | 10.6 |
| | Amps (LRA), Comp. 1 | 164 | 164 | 100 | 100 |
| | HP, Compressor 2 | 6 | 6 | 6 | 6 |
| | Amps (RLA), Comp. 2 | 22.4 | 22.4 | 10.6 | 10.6 |
| | Amps (LRA), Comp. 2 | 164 | 164 | 100 | 100 |
| Condenser Motor | No. | 2 | 2 | 2 | 2 |
| | Volts | 208/230 | 208/230 | 460 | 460 |
| | Phase | 1 | 1 | 1 | 1 |
| | HP | 3/4 | 3/4 | 3/4 | 3/4 |
| | Amps (FLA, each) | 4.2 | 4.2 | 2.3 | 2.3 |
| | Amps (LRA, each) | | | | |
| Evaporator Fan | No. | 1 | 1 | 1 | 1 |
| | Volts | 208/230 | 208/230 | 460 | 460 |
| | Phase | 3 | 3 | 3 | 3 |
| | HP | 3 | 5 | 3 | 5 |
| | Amps (FLA, each) | 10.4 | 16 | 5.2 | 8 |
| | Amps (LRA, each) | 74.5 | 82 | 38.1 | 41 |

II. INSTALLATION

A. GENERAL

1. **INSTALLATION** — Install this unit in accordance with The American National Standard Z223.1-latest edition booklet entitled “National Fuel Gas Code,” and the requirements or codes of the local utility or other authority having jurisdiction.

Additional helpful publications available from the “National Fire Protection Association” are: NFPA-90A - Installation of Air Conditioning and Ventilating Systems 1985 or latest edition. NFPA-90B - Warm Air Heating and Air Conditioning Systems 1984.

These publications are available from:

National Fire Protection Association, Inc.
Batterymarch Park
Quincy, MA 02269

2. **PRE-INSTALLATION CHECKPOINTS** — Before attempting any installation, carefully consider the following points:

Structural strength of supporting members

(Rooftop Installation)

Clearances and provision for servicing

Power supply and wiring

Gas supply and piping

Air duct connections and sizing

Drain facilities and connections

Location for minimum noise and vibration - away from bedroom windows

LOCATION CONSIDERATIONS

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, give special attention to the equipment location and exposure.

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

▲ WARNING

DISCONNECT ALL POWER TO UNIT BEFORE STARTING MAINTENANCE. FAILURE TO DO SO CAN CAUSE ELECTRICAL SHOCK RESULTING IN PERSONAL INJURY OR DEATH. REGULAR MAINTENANCE WILL REDUCE THE BUILDUP OF CONTAMINANTS AND HELP TO PROTECT THE UNIT’S FINISH.

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 an automobile polish will provide some protection.
3. A 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.

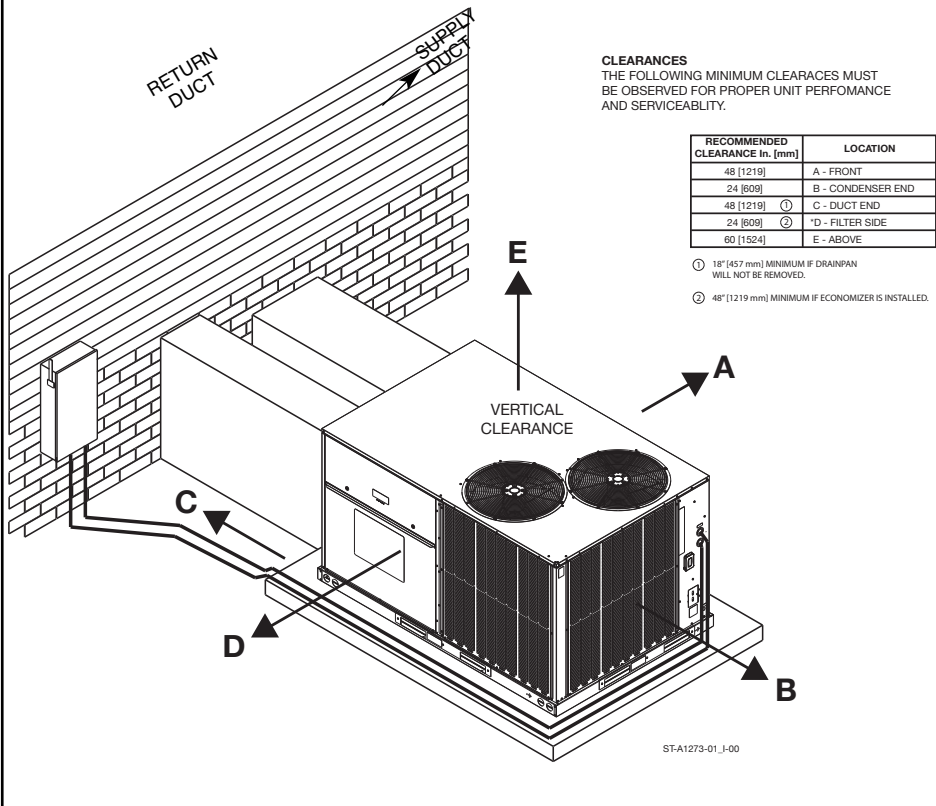
B. OUTSIDE INSTALLATION

▲ WARNING

THESE UNITS ARE DESIGNED CERTIFIED FOR OUTDOOR INSTALLATION ONLY. INSTALLATION INSIDE ANY PART OF A STRUCTURE CAN RESULT IN INADEQUATE UNIT PERFORMANCE AS WELL AS PROPERTY DAMAGE. INSTALLATION INSIDE CAN ALSO CAUSE RECIRCULATION OF FLUE PRODUCTS INTO THE CONDITIONED SPACE RESULTING IN PERSONAL INJURY OR DEATH.

(Typical outdoor slab installation is shown in Figure 7.)

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



1. Select a location where external water drainage cannot collect around unit.
2. Provide a level slab sufficiently high enough above grade to prevent surface water from entering the unit.
3. Locate the unit to provide proper access for inspection and servicing as shown in Figure 10.
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.
6. Where snowfall is anticipated, the height of the unit above the ground level must be considered. Mount unit high enough to be above anticipated maximum area snowfall and to allow combustion air to enter the combustion air inlet.
7. Select an area which will keep the areas of the vent, air intake, and A/C condenser fins free and clear of obstructions such as weeds, shrubs, vines, snow, etc. Inform the user accordingly.

C. ATTACHING EXHAUST AND COMBUSTION AIR INLET HOODS

IMPORTANT: Do not operate this unit without the exhaust/combustion air inlet hood properly installed. This hood is shipped in a carton in the blower compartment inside the unit and must be attached when the unit is installed. See Figure 5.

To attach exhaust/combustion air inlet hood:

1. Remove screws securing blower access panel and remove access panel. For location of blower access panel, see Figure 5.
2. Remove exhaust/combustion air inlet hood from the carton, located inside the blower compartment.
3. Attach blower access panel.
4. Attach the combustion air inlet/exhaust hood with screws. Reference Figure 5 for proper location. Screws are in carton with the hood.
5. Vent the unit using the flue exhaust hood, as supplied from the factory, without alteration or addition. Consult your local utility or other authority having jurisdiction for accepted venting techniques.

D. COVER PANEL INSTALLATION/

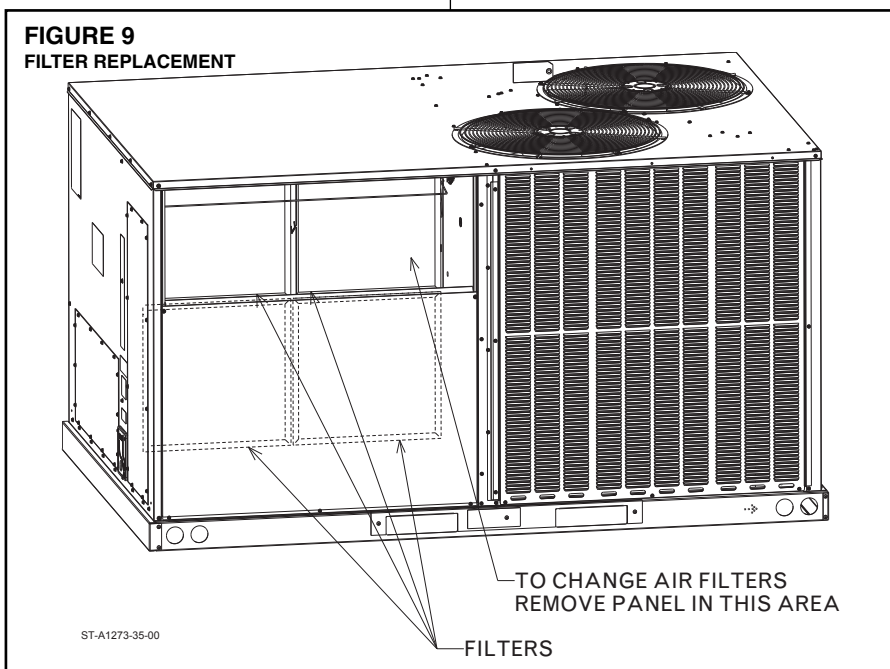
CONVERSION PROCEDURE

DOWNFLOW TO HORIZONTAL

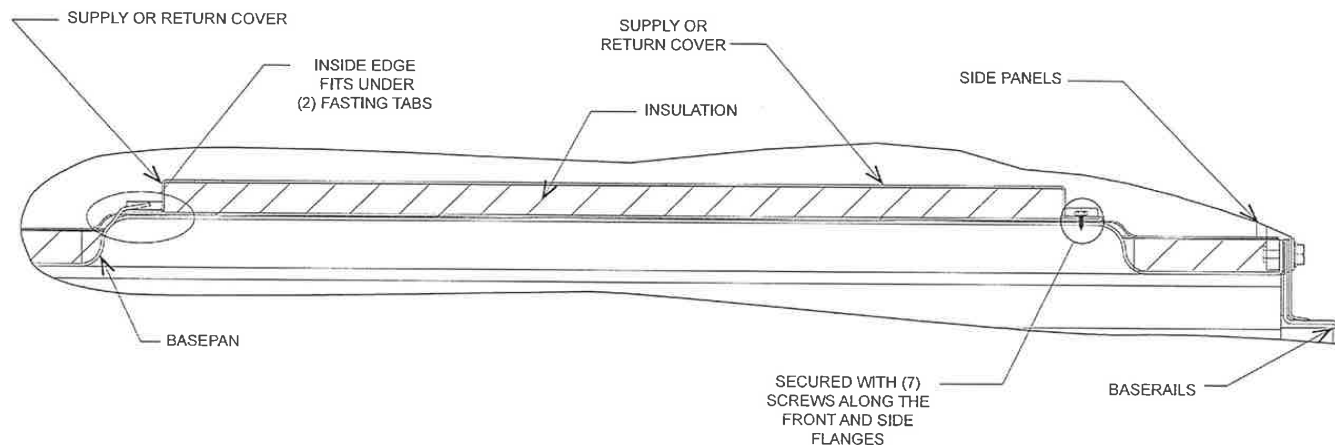
1. Remove the screws and covers from the outside of the supply and return sections. See Figure 2.
2. Install the covers over the bottom supply and return openings, painted side up, inserting the leading flange under the bracket provided. Place the back flange to top of the front bracket provided. See Figure 8.
3. Secure the return and supply cover to front bracket with one (1) screw.

E. FILTER REPLACEMENT

- Provided with 2" filters (see General Data for size).
- Unit is designed to use 2" or 4" filters. (See Figure 9)

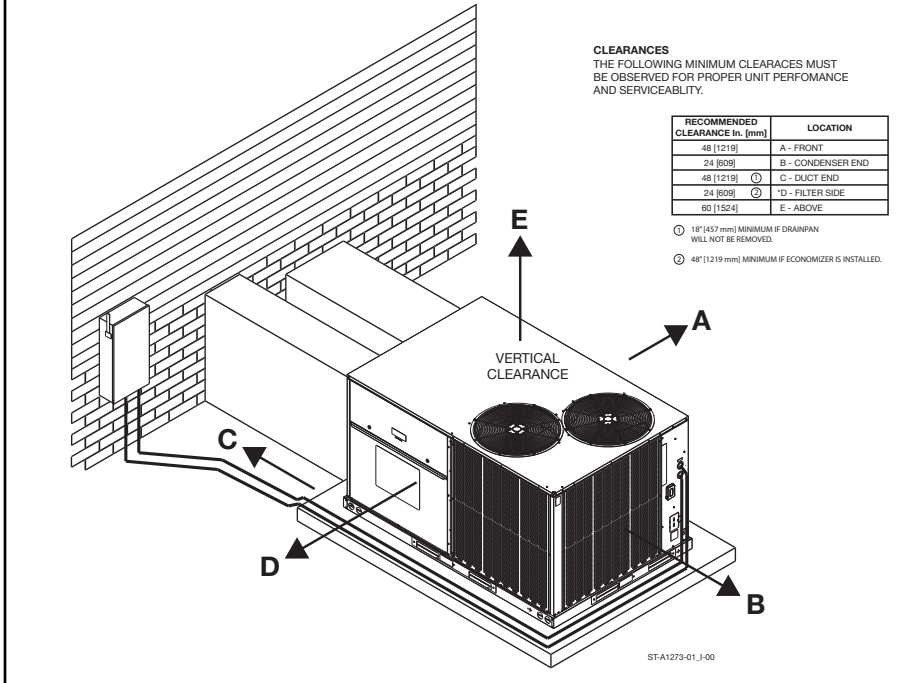


**FIGURE 8
COVER GASKET DETAIL FOR UNITS SHIPPED FOR DOWNFLOW APPLICATION BEING CONVERTED TO HORIZONTAL**



ST-A1273-01 M-00

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



F. ROOFTOP INSTALLATION

1. Before locating the unit on the roof, make sure that the roof structure is adequate to support the weight involved. (See Electrical & Physical Tables in this manual.) **THIS IS VERY IMPORTANT AND THE INSTALLER'S RESPONSIBILITY.**
2. For rigging and roofcurb details, see Figures 12 and 13.
3. 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, block off supply and return air openings to prevent excessive condensation.

G. DUCTING

The installing contractor should fabricate ductwork in accordance with local codes. Use industry manuals 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 FIREPLACE INSERT, STOVE, ETC. UNAUTHORIZED USE OF SUCH DEVICES MAY RESULT IN FIRE, CARBON MONOXIDE POISONING, EXPLOSION, PERSONAL INJURY, PROPERTY DAMAGE OR DEATH.

Place the unit as close to the conditioned space as possible allowing clearances as indicated. Run ducts as directly as possible to supply and return outlets. Use of non-flammable weatherproof flexible connectors on both supply and return connections at unit to reduce noise transmission is recommended.

On ductwork exposed to outside temperature and humidity, use a minimum of 2" of insulation and a vapor barrier. Distribution system in attic, furred space or crawl space should be insulated with at least 2" of insulation. Half-inch to 1" thick insulation is usually sufficient for ductwork inside the air conditioned space.

Provide balancing dampers for each branch duct in the supply system. Properly support ductwork from the structure.

IMPORTANT: In the event that the return air ducts must be run through an "unconfined" space containing other fuel burning equipment, it is imperative that the user/homeowner must be informed against future changes in construction which might change this to a "confined space." Also, caution the

user/homeowner against any future installation of additional equipment (such as power ventilators, clothes dryers, etc.), within the existing unconfined and/or confined space which might create a negative pressure within the vicinity of other solid, liquid, or gas fueled appliances.

RETURN AIR

▲ WARNING

NEVER ALLOW PRODUCTS OF COMBUSTION OR THE FLUE PRODUCTS TO ENTER THE RETURN AIR DUCTWORK, OR THE CIRCULATING AIR SUPPLY. ALL RETURN DUCTWORK MUST BE ADEQUATELY SEALED AND SECURED TO THE FURNACE WITH SHEET METAL SCREWS, AND JOINTS TAPED. ALL OTHER DUCT

JOINTS MUST BE SECURED WITH APPROVED CONNECTIONS AND SEALED AIRTIGHT.

FAILURE TO PREVENT PRODUCTS OF COMBUSTION FROM BEING CIRCULATED INTO THE LIVING SPACE CAN CREATE POTENTIALLY HAZARDOUS CONDITIONS, INCLUDING CARBON MONOXIDE POISONING THAT COULD RESULT IN PERSONAL INJURY OR DEATH.

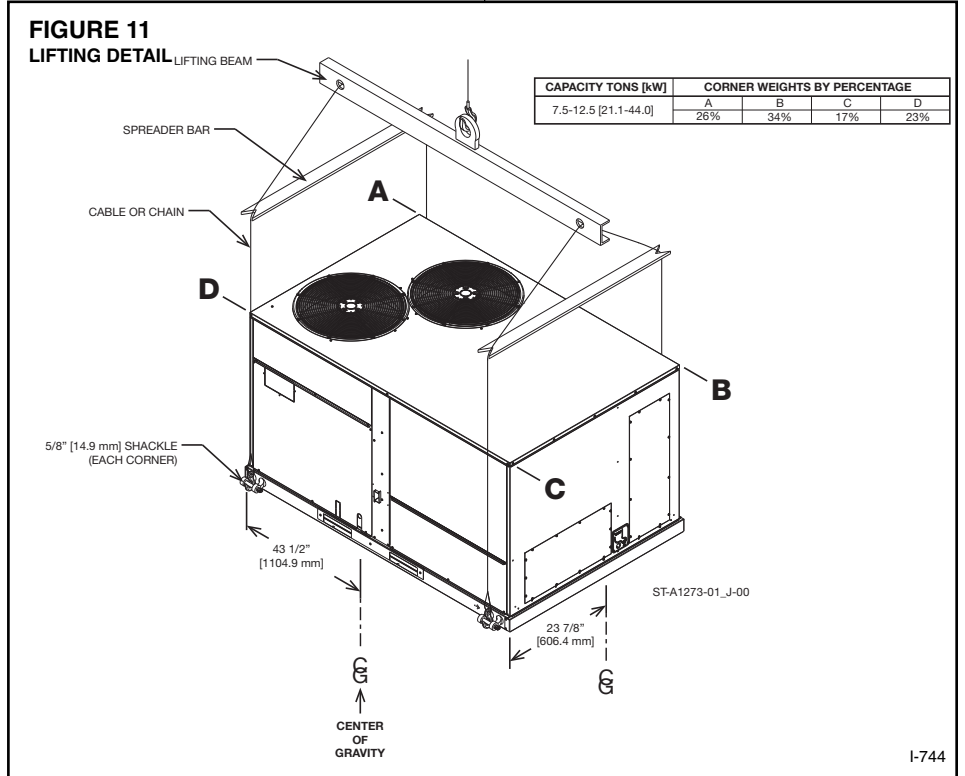
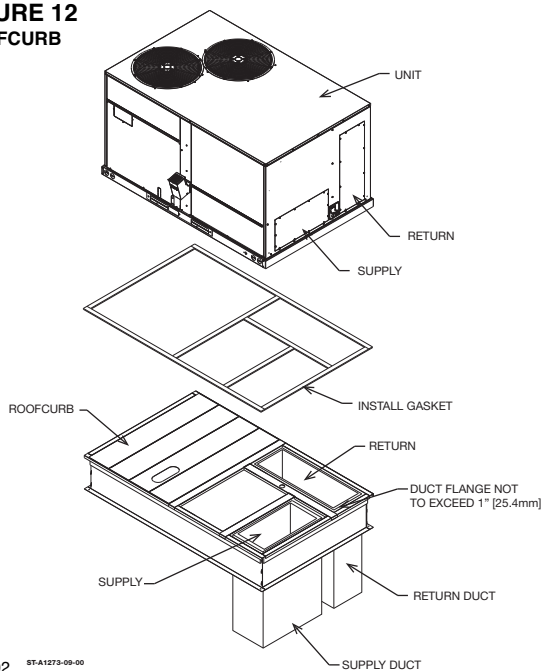
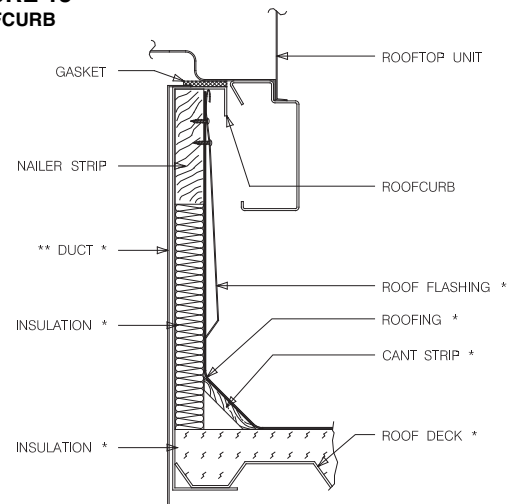


FIGURE 12
ROOFCURB



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FIGURE 13
ROOFCURB



* 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.

A074302

III. GAS SUPPLY, CONDENSATE DRAIN AND PIPING

A. GAS CONNECTION

IMPORTANT: Connect this unit only to gas supplied by a commercial utility.

1. Install gas piping in accordance with local codes and regulations of the local utility company. In the absence of local codes, the installation must conform to the specifications of the National Fuel Gas Code, ANSI Z223.1 - latest edition.

NOTE: The use of flexible gas connectors is not permitted.

2. Place backup wrench on valve, shown in Figures 14A and 14B.
3. Connect the gas line to the gas valve supplied with unit. Routing can be through the gas pipe opening shown in Figure 14C or through the base as shown in Figure 17.
4. Size the gas line to the furnace adequate enough to prevent undue pressure drop and never less than 3/4" pipe.
5. Install a drip leg or sediment trap in the gas supply line as close to the unit as possible.

6. Install an outside ground joint union to connect the gas supply to the control assembly at the burner tray.
7. Gas valves have been factory installed. Install a manual gas valve where local codes specify a shut-off valve outside the unit casing. (See Figure 14.)
8. Make sure piping is tight. **A pipe compound resistant to the action of liquefied petroleum gases must be used at all threaded pipe connections.**
9. **IMPORTANT:** any additions, changes or conversions required for the furnace to satisfactorily meet the application should be made by a qualified installer, service agency or the gas supplier, using factory-specified or approved parts. In the commonwealth of Massachusetts, installation must be performed by a licensed plumber or gas fitter for appropriate fuel.

IMPORTANT: Disconnect the furnace and its individual shutoff valve from the gas supply piping during any pressure testing of that system at test pressures in

excess of 1/2 pound per square inch gauge or isolate the system from the gas supply piping system by closing its individual manual shutoff valve during any pressure testing of this gas supply system at pressures equal to or less than 1/2 PSIG.

TO CHECK FOR GAS LEAKS, USE A SOAP AND WATER SOLUTION OR OTHER APPROVED METHOD. DO NOT USE AN OPEN FLAME.

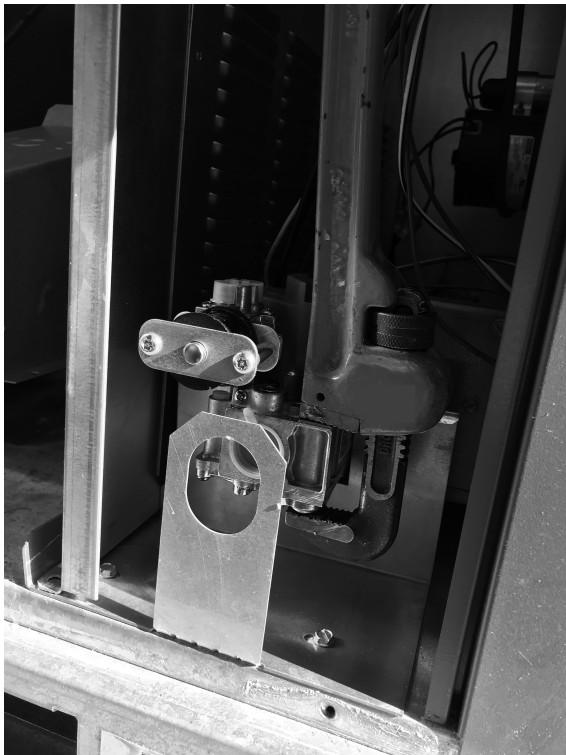
▲ WARNING

DO NOT USE AN OPEN FLAME TO CHECK FOR LEAKS. THE USE OF AN OPEN FLAME CAN RESULT IN FIRE, EXPLOSION, PROPERTY DAMAGE, PERSONAL INJURY OR DEATH.

IMPORTANT: Check the rating plate to make certain the appliance is equipped to burn the type of gas supplied. Care should be taken after installation of this equipment that the gas control valve not be subjected to high gas supply line pressure.

In making gas connections, avoid strains as they may cause noise and damage the controls. A backup wrench is required to be used on the valve to avoid damage.

FIGURE 14A
BACKUP WRENCH LOCATION
HONEYWELL GAS VALVE



ST-A1273-37-00

FIGURE 14B
BACKUP WRENCH LOCATION
WHITE RODGERS GAS VALVE



ST-A1273-38-00

The capacities of gas pipe of different diameters and lengths in cu. ft. per hr. with pressure drop of 0.3 in. and specific gravity of 0.60 (natural gas) are shown in Table 1.

After determining the pipe length, select the pipe size which will provide the minimum cubic feet per hour required for the gas input rating of the furnace. By formula:

$$\text{Cu. Ft. Per Hr. Required} = \frac{\text{Gas Input of Furnace (BTU/HR)}}{\text{Heating Value of Gas (BTU/FT}^3\text{)}}$$

The gas input of the furnace is marked on the furnace rating plate. The heating value of the gas (BTU/FT³) may be determined by consulting the local natural gas utility or the L.P. gas supplier.

TABLE 1
GAS PIPE CAPACITY TABLE (CU. FT./HR.)

| Nominal Iron Pipe Size, Inches | Equivalent Length of Pipe, Feet | | | | | | | |
|--------------------------------|---------------------------------|-------|-----|-----|-----|-----|-----|-----|
| | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
| 1/2 | 132 | 92 | 73 | 63 | 56 | 50 | 46 | 43 |
| 3/4 | 278 | 190 | 152 | 130 | 115 | 105 | 96 | 90 |
| 1 | 520 | 350 | 285 | 245 | 215 | 195 | 180 | 170 |
| 1 1/4 | 1,050 | 730 | 590 | 500 | 440 | 400 | 370 | 350 |
| 1 1/2 | 1,600 | 1,100 | 890 | 760 | 670 | 610 | 560 | 530 |

FIGURE 14C
SUGGESTED GAS PIPING

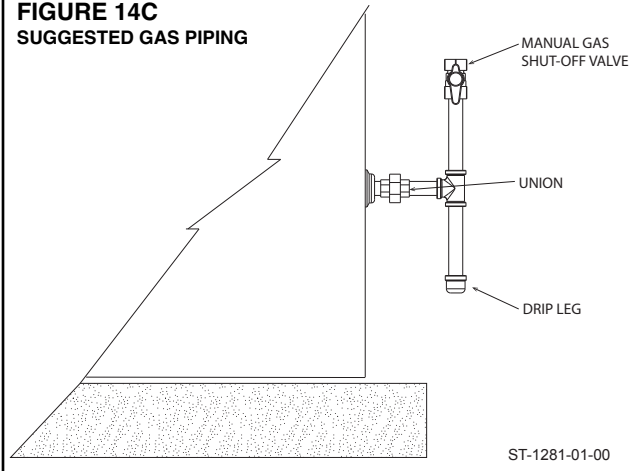


TABLE 2
LP GAS PIPE CAPACITY TABLE (CU. FT./HR.)

Maximum capacity of pipe in thousands of BTU per hour of undiluted liquefied petroleum gases (at 11 inches water column inlet pressure).
(Based on a Pressure Drop of 0.5 Inch Water Column)

| Nominal Iron Pipe Size, Inches | Length of Pipe, Feet | | | | | | | | | | | |
|--------------------------------|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 125 | 150 |
| 1/2 | 275 | 189 | 152 | 129 | 114 | 103 | 96 | 89 | 83 | 78 | 69 | 63 |
| 3/4 | 567 | 393 | 315 | 267 | 237 | 217 | 196 | 182 | 173 | 162 | 146 | 132 |
| 1 | 1,071 | 732 | 590 | 504 | 448 | 409 | 378 | 346 | 322 | 307 | 275 | 252 |
| 1-1/4 | 2,205 | 1,496 | 1,212 | 1,039 | 913 | 834 | 771 | 724 | 677 | 630 | 567 | 511 |
| 1-1/2 | 3,307 | 2,299 | 1,858 | 1,559 | 1,417 | 1,275 | 1,181 | 1,086 | 1,023 | 976 | 866 | 787 |
| 2 | 6,221 | 4,331 | 3,465 | 2,992 | 2,646 | 2,394 | 2,205 | 2,047 | 1,921 | 1,811 | 1,606 | 1,496 |

Example (LP): Input BTU requirement of unit, 150,000
Equivalent length of pipe, 60 ft. = 3/4" IPS required.

B. LP CONVERSION

▲ WARNING

THIS UNIT IS EQUIPPED AT THE FACTORY FOR USE ON NATURAL GAS ONLY. CONVERSION TO LP GAS REQUIRES A SPECIAL KIT SUPPLIED BY THE DISTRIBUTOR OR MANUFACTURER. MAILING ADDRESSES ARE LISTED ON THE FURNACE RATING PLATE, PARTS LIST AND WARRANTY. FAILURE TO USE THE PROPER CONVERSION KIT CAN CAUSE FIRE, CARBON MONOXIDE POISONING, EXPLOSION, PERSONAL INJURY, PROPERTY DAMAGE OR DEATH.

NOTE: The valve can be converted to use liquefied petroleum (LP) gas by replacing the pressure regulator spring with the conversion kit spring. This LP kit spring allows the regulator to maintain the proper manifold pressure for LP gas.

NOTE: Order the correct LP conversion kit from the furnace manufacturer. **See Conversion Kit Index shipped with unit for proper LP kit number. Furnace conversion to LP gas must be performed by a qualified technician.**

C. ADJUSTING OR CHECKING FURNACE INPUT

- Natural Gas Line Pressure 5" - 10.5" W.C.
- LP Gas Line Pressure 11" - 13" W.C.

| | Manifold pressure (in. W.C.) | |
|-------------|------------------------------|----------|
| | High fire | Low fire |
| Natural Gas | 3.5 | 1.7 |
| LP | 10 | 4.9 |

Natural gas manifold pressure tolerance ±0.3.
LP gas manifold pressure tolerance ±0.5.

Supply and manifold pressure taps are located on the gas valve body 1/8" N.P.T. and on the manifold.

Use a properly calibrated manometer gauge for accurate gas pressure readings.

Only small variations in the gas flow should be made by means of the pressure regulator adjustment. Furnaces functioning on LP gas must be set by means of the tank or branch supply regulators. The furnace manifold pressure should be set at 10" W.C. at the gas control valve.

To adjust the pressure regulator, remove the regulator cap and turn the adjustment screw clockwise to increase pressure or counterclockwise to decrease pressure. **Then replace the regulator cap securely.**

Any necessary major changes in the gas flow rate should be made by changing the size of the burner orifices. To change orifice spuds, shut off the manual main gas valve and remove the gas manifold.

For elevations up to 2,000 feet, rating plate input ratings apply. For high altitudes (elevations over 2,000 ft.), see conversion kit index 92-21519-72 for derating and orifice spud sizes.

Check of input is important to prevent over-firing of the furnace beyond its design-rated input. NEVER SET INPUT ABOVE THAT SHOWN ON THE RATING PLATE. Use the following table or formula to determine input rate.

TABLE 3

| Meter Time in Minutes and Seconds for Normal Input Rating of Furnaces Equipped with Natural or LP Gas | | | | | | | | | | | |
|---|-----------------------|-----------------------|------|------|------|------|------|------|------|--------------|------|
| Input BTU/HR | Meter Size Cu. Ft. | Natural Gas (cu. Ft.) | | | | | | | | LP (cu. Ft.) | |
| | | 900 | | 1000 | | 1050 | | 1100 | | 2500 | |
| | | MIN. | SEC. | MIN. | SEC. | MIN. | SEC. | MIN. | SEC. | MIN. | SEC. |
| 150,000 | ONE | 0 | 21.6 | 0 | 24 | 0 | 25.2 | 0 | 26.4 | 1 | 0 |
| | TEN | 3 | 36 | 4 | 0 | 1 | 15.6 | 4 | 24 | 10 | 0 |
| 205,000 | ONE | 0 | 15.8 | 0 | 17.6 | 0 | 18.4 | 0 | 19.3 | 0 | 43.9 |
| | TEN | 2 | 38.0 | 2 | 55.6 | 0 | 55.3 | 3 | 13.2 | 7 | 19 |
| 225,000 | ONE | 0 | 14.4 | 0 | 16 | 0 | 16.8 | 0 | 17.6 | 0 | 40 |
| | TEN | 2 | 24 | 2 | 40 | 0 | 50.4 | 2 | 56 | 6 | 40 |

$$\text{Cu. Ft. Per Hr. Required} = \frac{\text{Heating Value of Gas (BTU/Cu. Ft.)} \times 3600}{\text{Time in Seconds (for 1 Cu. Ft.) of Gas}}$$

Start the furnace and measure the time required to burn one cubic foot of gas. Prior to checking the furnace input, make certain that all other gas appliances are shut off, with the exception of pilot burners. Time the meter with only the furnace in operation.

IMPORTANT NOTE FOR ALTITUDES ABOVE 2,000 FEET (610 METERS): The main burner orifices in your furnace and in these kits are sized for the nameplate input and intended for installations at elevations up to 2,000 feet in the USA or Canada, or for elevations of 2,000 - 4,500 feet (610 - 1,373 meters) in Canada if the unit has been derated at the factory. For

elevations above 2,000 feet (610 meters) **IN THE USA ONLY** (see ANSI-Z223.1), the burner orifices must be sized to reduce the input 4% for each 1,000 feet (305 meters) above sea level.

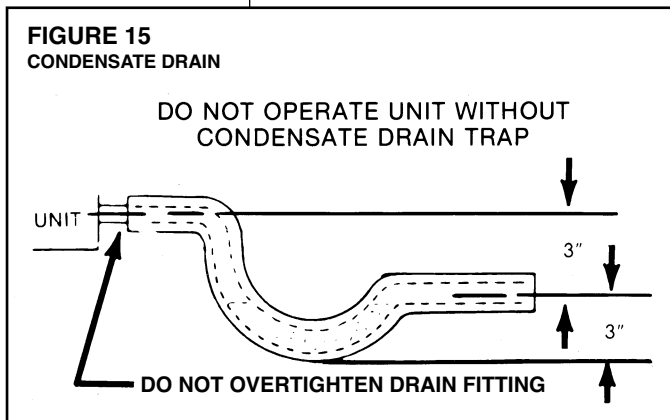
NOTICE: DERATING OF THE HEATING INPUT FOR HIGH ALTITUDE IN THE FIELD IS UNLAWFUL IN CANADA (REFER TO CAN/CGA 2.17). UNITS INSTALLED IN ALTITUDES GREATER THAN 2,000 FEET (610 METERS) MUST BE SHIPPED FROM THE FACTORY OR FROM A FACTORY AUTHORIZED CONVERSION STATION WITH THE HEATING INPUT DERATED BY 10% SO AS TO OPERATE PROPERLY IN ALTITUDES FROM 2,000 - 4,500 FEET (610 - 1,373 METERS).

D.CONDENSATE DRAIN

IMPORTANT: Install a condensate trap to ensure proper condensate drainage. See Figure 15.

The condensate drain pan has a threaded female 3/4 inch NPT connection. Consult local codes or ordinances for specific requirements of condensate drain piping and disposal.

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



IV. WIRING

A. POWER SUPPLY

▲ WARNING

TURN OFF THE MAIN ELECTRICAL POWER AT THE BRANCH CIRCUIT DISCONNECT CLOSEST TO THE UNIT BEFORE ATTEMPTING ANY WIRING. FAILURE TO DO SO CAN CAUSE ELECTRICAL SHOCK RESULTING IN PERSONAL INJURY OR DEATH.

1. **All wiring should be made in accordance with the National Electrical Code.** Consult the local power company to determine the availability of sufficient power to operate the unit. Check the voltage at power supply to make sure it corresponds to the unit's RATED VOLTAGE REQUIREMENT. Install a branch circuit disconnect near the rooftop, in accordance with the N.E.C., C.E.C. or local codes.
2. It is important that proper electrical power is available at the unit. Voltage should not vary more than 10% from that stamped on the unit nameplate. On three phase units, phases must be balanced within 3%.
3. For branch circuit wiring (main power supply to unit disconnect), the minimum wire size for the length of run can be determined from Table 1 using the circuit ampacity found on the unit rating plate. Use the smallest wire size allowable in Table 4 from the unit disconnect to unit.

4. For through the base wiring entry reference **Figure 18**. All fittings and conduit are field supplied for this application. Reference the chart with **Figure 18** for proper hole and conduit size.

NOTES:

1. For branch circuit wiring (main power supply to unit disconnect), the minimum wire size for the length of run can be determined from this table using the circuit ampacity found on the unit rating plate. From the unit disconnect to unit, the smallest wire size allowable in Table 1 may be used, as the disconnect must be in sight of the unit.
2. Wire size based on 75°C rated wire insulation for 1% voltage drop.
3. For more than 3 conductors in a raceway or cable, see the N.E.C. (C.E.C. in Canada) for derating the ampacity of each conductor.

IMPORTANT: THIS UNIT IS APPROVED FOR USE WITH COPPER CONDUCTORS ONLY CONNECTED TO UNIT CONTACTOR.

WARRANTY MAY BE JEOPARDIZED IF ALUMINUM WIRE IS CONNECTED TO UNIT CONTACTOR.

Special instructions apply for power wiring with aluminum conductors: Warranty is void if connections are not made per instructions.

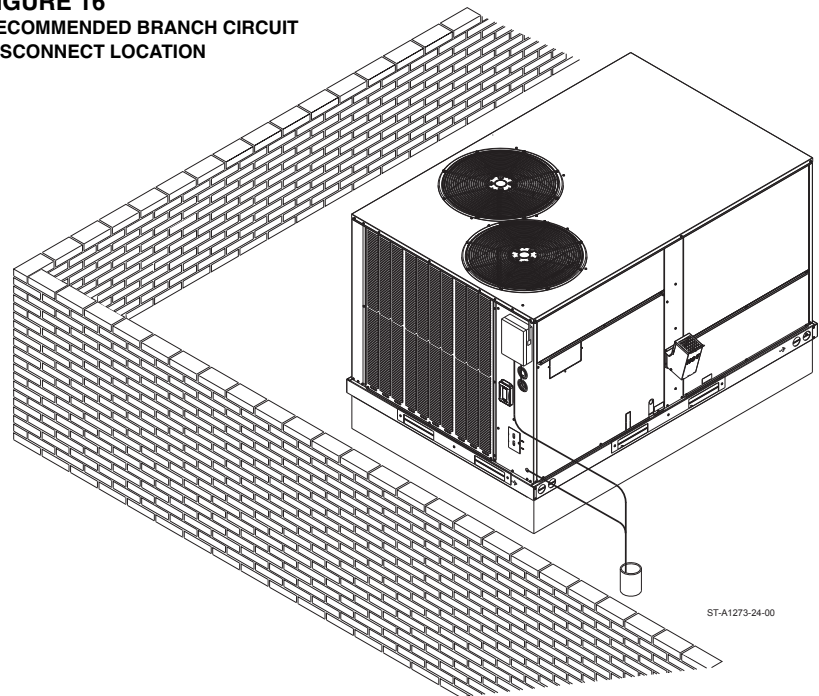
Attach a length (6" or more) of recommended size copper wire to the unit contactor terminals L1, L2 and L3 for three phase.

Select the equivalent aluminum wire size from the tabulation below:

Splice copper wire pigtails to aluminum wire with U.L. recognized connectors for copper-aluminum splices. Please exercise the following instructions very carefully to obtain a positive and lasting connection:

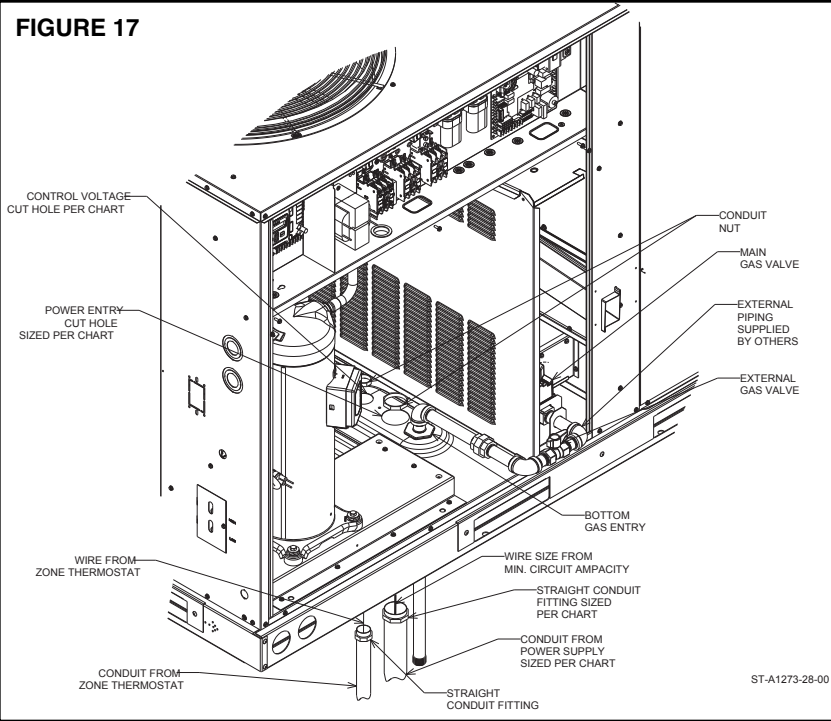
1. Strip insulation from aluminum conductor.
2. Coat the stripped end of the aluminum wire with the recommended inhibitor, and wire brush the aluminum surface through inhibitor. INHIBITORS: Brundy-Pentex "A"; Alcoa-No. 2EJC; T & B-KPOR Shield.
3. Clean and recoat aluminum conductor with inhibitor.
4. Make the splice using the above listed wire nuts or split bolt connectors.
5. Coat the entire connection with inhibitor and wrap with electrical insulating tape.

FIGURE 16
RECOMMENDED BRANCH CIRCUIT
DISCONNECT LOCATION

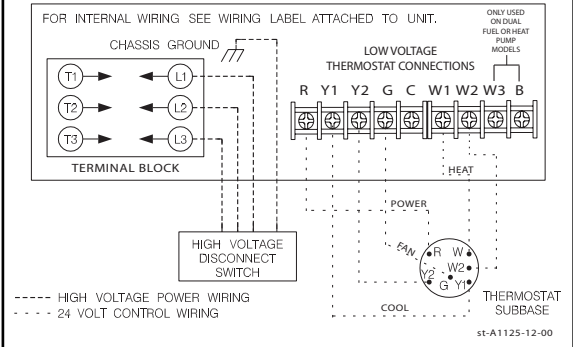


ST-A1273-24-00

FIGURE 17



**FIGURE 18
TYPICAL THERMOSTAT WIRING**



| | WIRE SIZE, AWG | | | | | | | | | | | |
|---------------------|----------------|------|------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| | 14 | 12 | 10 | 8 | 6 | 4 | 3 | 2 | 1 | 0 | 00 | 000 |
| CONDUIT SIZE | 1/2" | 1/2" | 1/2" | 3/4" | 1" | 1" | 1-1/4" | 1-1/4" | 1-1/2" | 1-1/2" | 2" | 2" |
| HOLE SIZE | 7/8" | 7/8" | 7/8" | 1-31/32" | 1-23/64" | 1-23/64" | 1-23/32" | 1-23/32" | 1-31/32" | 1-31/32" | 2-15/32" | 2-15/32" |

NOTES: 1. DETERMINE REQUIRED WIRE SIZE FROM MINIMUM CIRCUIT AMPACITY SHOWN IN INSTALLATION & OPERATING INSTRUCTION.
2. BOTTOM POWER ENTRY WILL NOT ACCOMMODATE WIRE LARGER THAN #2 AWG (SHADED AREA).

B. HOOK-UP

To wire unit, refer to the following hook-up diagram.
Refer to Figures 2 and 17 for location of wiring entrances.
Wiring to be done in the field between the unit and devices not attached to the unit, or between separate devices which are field installed and located, shall conform with the temperature limitation for Type T wire [63°F rise (35°C)] when installed in accordance with the manufacturer's instructions.

C. INTERNAL WIRING

A diagram of the internal wiring of this unit is located on the inside of control access panel and in this manual. If any of the original wire as supplied with the appliance must be replaced, the wire gauge and insulation must be 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. THERMOSTAT

The room thermostat must be compatible with the spark ignition control on the unit. Generally, all thermostats that are not of the "current robbing" type are compatible with the integrated furnace control. The low voltage wiring should be sized as shown in Table 1.
Install the room thermostat in accordance with the instruction sheet packed in the box with the thermostat. Run the thermostat lead wires through control entry opening (Figure 2 or Figure 17) and connect to the low voltage thermostat connections (see wiring diagram). Never install the thermostat on an outside wall or where it will be influenced by drafts, concealed hot or cold water pipes or ducts, lighting fixtures, radiation from fireplace, sun rays,

lamps, televisions, radios or air streams from registers. Refer to instructions packed with the thermostat for "heater" selection or adjustment.
The following is a list of recommended thermostats to be used with or without an economizer:

TABLE 4

| FIELD WIRE SIZE FOR 24 VOLT THERMOSTAT CIRCUITS | | | | | | |
|---|---------------------------------|-----|-----|-----|-----|-----|
| Thermostat Load - Amps | SOLID COPPER WIRE - AWG. | | | | | |
| | 3.0 | 16 | 14 | 12 | 10 | 10 |
| 2.5 | 16 | 14 | 12 | 12 | 12 | 10 |
| 2.0 | 18 | 16 | 14 | 12 | 12 | 10 |
| | 50 | 100 | 150 | 200 | 250 | 300 |
| | Length of Run - Feet (1) | | | | | |

(1) The total wire length is the distance from the furnace to the thermostat and back to the furnace.

NOTE: DO NOT USE CONTROL WIRING SMALLER THAN NO. 18 AWG.

V. FURNACE SECTION CONTROLS AND IGNITION SYSTEM

NORMAL FURNACE OPERATING SEQUENCE

This unit is equipped with a two stage integrated direct spark ignition control.

NORMAL HEAT MODE

A. Call For First Stage (low fire) Only:

1. Zone thermostat contacts close, a call for first stage (low fire) heat is initiated.
2. Control runs self check.
3. Control checks the high-limit switch for normally closed contacts, the pressure switch for normally open contacts, and all flame rollout switches for continuity.
4. Control energizes the inducer.
5. Control checks the pressure switch for closure.
6. If the pressure switch is closed, the control starts a 30 second prepurge. If the pressure switch is still open after 180 seconds, the inducer will be energized until closure.
7. After prepurge timeout, control initiates spark for 2 seconds minimum, 7 second maximum ignition trial, initiates 45 second, second stage (high fire) warm up timing.
8. Control detects flame, de-energizes spark and initiates 45 second delay on blower timing.
9. After a fixed 45 seconds indoor blower delay on, the control energizes the indoor blower.
10. After the 45 second second stage warmup period control checks thermostat input. If only W1 is called for, W2 is de-energized.
11. Control enters normal operating loop where all inputs are continuously checked.

B. Call For Second Stage, After First Stage Established; Starting from A.11:

1. If a call for second stage (high fire) is initiated after a call for first stage heat is established, the control assures the pressure switch is closed and energizes the second stage of the gas valve.
2. Control enters normal operating loop where all inputs are continuously checked.

C. Second Stage Satisfied; First Stage Still Called For; Starting From B.2:

1. Once the call for second stage is satisfied, the control reduces the gas valve to first stage.
2. Control enters normal operating loop where all inputs are continuously checked.

D. First Stage Satisfied:

1. Zone thermostat is satisfied.
2. Control de-energizes gas valve.
3. Control senses loss of flame.
4. Control initiates 5 second inducer postpurge and 90 second indoor blower delay off.
5. Control de-energizes inducer blower.
6. Control de-energizes indoor blower.
7. Control in the stand by mode with solid red LED.

E. First Stage and Second Stage Called Simultaneously:

1. Zone thermostat contacts close, a call for first stage (low fire) and second stage (high fire) heat is initiated.
2. Control runs self check.
3. Control checks the limit switch for normally closed contacts, the switch for normally open contacts, and the flame rollout switch for continuity.
4. Control energizes the inducer.
5. Control checks the pressure switch for closure.
6. If the pressure switch is closed, the control starts a 30 second prepurge. If the switch is still open after 180 seconds, the inducer will be energized until closure.
7. After prepurge timeout, control initiates spark for 2 seconds minimum, 7 second maximum ignition trial, and initiates 45 second second stage warm up timing.
8. Control detects flame, de-energizes spark and starts a 45 second indoor blower delay on timing.
9. After a fixed 45 seconds indoor blower delay on, the control energizes the indoor blower.
10. After the 45 seconds second stage warmup period control checks the thermostat input. If W1 and W2 is present control enters normal operating loop where all inputs are continuously checked.

F. First Stage and Second Stage Removed Simultaneously:

1. Upon a loss of W1 and W2 the gas valve is de-energized.
2. Upon a loss of flame, the inducer will complete a 5 second postpurge and the indoor blower will complete a 90 second delay off.
3. Control in the stand by mode with solid red LED.

The integrated control is a four-ignition system.

After a total of four cycles without sensing main burner flame, the system goes into a 100% lockout mode. After one hour, the ignition control repeats the prepurge and ignition cycles for 4 tries and then go into 100% lockout mode again. It continues this sequence of cycles and lockout each hour until ignition is successful or power is interrupted. During the lockout mode, neither the ignitor or gas valve will be energized until the system is reset by turning the thermostat to the "OFF" position or interrupting the electrical power to the unit for 3 seconds or longer. The induced draft blower and main burner will shut off when the thermostat is satisfied.

The circulating air blower will start and run on the heating speed if the thermostat fan switch is in the "ON" position.

All integrated furnace controls come standard with a 7 segment diagnostic display. During standby mode with no fault codes present, the display will read "0" (zero). During normal thermostat

heating, cooling or continuous fan operations a letter will be displayed to describe the mode of operation outlined in the Wiring Diagrams: Electrical Wiring Schematic: Alarm Codes.

OPERATING INSTRUCTIONS

This appliance is equipped with integrated furnace control. This device lights the main burners each time the room thermostat (closes) calls for heat. See operating instructions on the back of the furnace/controls access panel.

▲ WARNING

DO NOT ATTEMPT TO MANUALLY LIGHT THIS FURNACE WITH A MATCH OR ANY OPEN FLAME. ATTEMPTING TO DO SO CAN CAUSE AN EXPLOSION OR FIRE RESULTING IN PROPERTY DAMAGE, PERSONAL INJURY OR DEATH.

TO START THE FURNACE

1. Set the thermostat to its lowest setting.
2. Turn off all electric power to the appliance.
3. This appliance does not have a pilot. It is equipped with an ignition device which automatically lights the burner. Do not try to light the burner by hand.
4. Remove control door.
5. Move control switch/knob on the gas valve to the "OFF" position.
6. Wait five (5) minutes to clear out any gas. Then smell for gas, including near the floor. If you smell gas, STOP! Follow B in the safety information on the Operating Instructions located on the back of the controls/access panel. If you don't smell gas, go to the next step.
7. Move the gas control switch/knob on the gas valve from "OFF" position to "ON" position. Operate this appliance with the gas control switch/knob on the gas valve in the "ON" position only.
8. Replace the control door.
9. Turn on all electric power to the appliance.
10. Set the thermostat to the desired setting.
11. If the appliance will not operate, follow the instructions below on how to shut down the furnace.

▲ WARNING

THE SPARK IGNITOR AND IGNITION LEAD FROM THE IGNITION CONTROL ARE HIGH VOLTAGE. KEEP HANDS OR TOOLS AWAY TO PREVENT ELECTRICAL SHOCK. SHUT OFF ELECTRICAL POWER BEFORE SERVICING ANY OF THE CONTROLS. FAILURE TO ADHERE TO THIS WARNING CAN RESULT IN PERSONAL INJURY OR DEATH.

The initial start-up on a new installation may require the control system to be energized for some time until air has bled through the system and fuel gas is available at the burners.

TO SHUT DOWN FURNACE

1. Set the thermostat to the lowest setting.
2. Turn off all electric power to the appliance if service is to be performed.
3. Remove control door.
4. Move control switch/knob on the gas valve to the "OFF" position.
5. Replace control door.

▲ WARNING

SHOULD OVERHEATING OCCUR OR THE GAS SUPPLY FAIL TO SHUT OFF, SHUT OFF THE MANUAL GAS VALVE TO THE APPLIANCE BEFORE SHUTTING OFF THE ELECTRICAL SUPPLY. FAILURE TO DO SO CAN RESULT IN AN EXPLOSION OR FIRE CAUSING PROPERTY DAMAGE, SEVERE PERSONAL INJURY OR DEATH!

BURNERS

Burners for these units have been designed so that field adjustment is not required. Burners are tray-mounted and accessible for easy cleaning when required.

MANUAL RESET OVERTEMPERATURE CONTROL

Two manual reset overtemperature controls are located on the burner shield. These devices sense blockage in the heat exchanger or insufficient combustion air. This shuts off the main burners if excessive temperatures occur in the burner compartment.

Operation of this control indicates an abnormal condition. Therefore, the unit should be examined by a qualified installer, service agency, or the gas supplier before being placed back into operation.

▲ WARNING

Do not jumper this device! Do not reset the overtemperature control without taking corrective action to assure that an adequate supply of combustion air is maintained under all conditions of operation. Failure to do so can result in carbon monoxide poisoning or death. Replace this control only with the identical replacement part.

PRESSURE SWITCH

This furnace has two pressure switches for sensing a blocked exhaust or a failed induced draft blower. They are normally open and close when the induced draft blower starts, indicating air flow through the combustion chamber.

LIMIT CONTROL

The supply air high temperature limit cut-off is set at the factory and cannot be adjusted. It is calibrated to prevent the air temperature leaving the furnace from exceeding the maximum outlet air temperature.

▲ WARNING

DO NOT JUMPER THIS DEVICE! DOING SO CAN CAUSE A FIRE OR EXPLOSION RESULTING IN PROPERTY DAMAGE, PERSONAL INJURY OR DEATH.

IMPORTANT: Replace this control only with the identical replacement part.

VI. COOLING SECTION OPERATION

COOLING MODE

A. Call for first stage cooling

1. Zone thermostat contacts close and a call for cooling is initiated.
2. Inputs 'Y1' and 'G'. After 1 sec. delay, control energizes indoor blower and to the control are energized.
3. Control senses 'Y1' and 'G'. After 1 sec. delay, control energizes indoor blower and first stage compressor.
4. Control enters normal operating loop where all inputs are continuously checked.
5. Zone thermostat is satisfied.
6. Control de-energizes indoor blower relay after 80 second indoor blower delay off.
7. Control in the stand by mode with solid red LED.

B. Call for second stage cooling. After first stage cooling established: starting from A4.

1. If a call for second stage cooling is initiated after a call for first stage cooling is established, the control energizes Y2 and energizes the second stage compressor.

2. Control enters normal operating loop where all inputs are continuously checked.

C. Second stage satisfied: first stage still called for: starting from B2.

1. Y2 is de-energized and second stage compressor is de-energized.

D. First stage and second stage called simultaneously.

1. Zone thermostat contacts close, a call for first and second stage cooling is initiated.
2. Inputs Y1, Y2 and G to the control are energized.
3. Control senses Y1, Y2 and G, after 1 second delay, control energizes indoor blower, first and second stage compressor are energized.

E. First stage and second stage removed simultaneously.

1. Upon a loss of Y1 and Y2 each compressor is de-energized. Control de-energizes indoor blower relay after 80 second indoor blower delay off.
2. Control in the stand by mode with solid red LED.

CONTINUOUS FAN MODE

A 'G' input only indicates a zone thermostat call for continuous indoor blower operation.

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 preprogrammed 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).

VII. SYSTEM OPERATING INFORMATION

ADVISE THE CUSTOMER

1. Change the air filters regularly. The heating system operates better, more efficiently and more economically.
2. Arrange the furniture and drapes so that the supply air registers and the return air grilles are unobstructed.
3. Close doors and windows. This reduces the heating and cooling load on the system.
4. Avoid excessive use of exhaust fans.
5. Do not permit the heat generated by television, lamps or radios to influence the thermostat operation.
6. Except for the mounting platform, keep all combustible articles three feet from the unit and exhaust system.
7. **IMPORTANT:** *Replace all blower doors and compartment cover after servicing the unit. Do not operate the unit without all panels and doors securely in place.*
8. Do not allow snow or other debris to accumulate in the vicinity of the appliance.

FURNACE SECTION MAINTENANCE

The unit's furnace should operate for many years without excessive scale build-up in flue passageways; however, it is recommended that a qualified installer, service agency, or the gas supplier annually inspect the flue passageways, the exhaust system and the burners for continued safe operation, paying particular attention to deterioration from corrosion or other sources.

If during inspection the flue passageways and exhaust system are determined to require cleaning, the following procedures should be followed (**by a qualified installer, service agency, or gas supplier**):

1. Turn off the electrical power to the unit and set the thermostat to the lowest temperature.
2. Shut off the gas supply to the unit either at the meter or at manual valve in the supply piping.

▲ WARNING

LABEL ALL WIRES PRIOR TO DISCONNECTION WHEN SERVICING CONTROLS. WIRING ERRORS CAN CAUSE IMPROPER AND DANGEROUS OPERATION RESULTING IN FIRE, ELECTRICAL SHOCK, PROPERTY

DAMAGE, PERSONAL INJURY OR DEATH.

3. Remove the furnace controls access panel and the control box cover.
4. Disconnect the gas supply piping from the gas valve.
5. Disconnect the wiring to the induced draft blower motor, gas valve, flame sensor, and flame roll-out control, and ignitor cable. **Mark all wires disconnected for proper reconnection.**
6. Remove the screws (4) connecting the burner tray to the heat exchanger mounting panel.
7. Remove the burner tray and the manifold assembly from the unit.
8. Remove the screws (10) connecting the induced draft blower to the collector box and screws (12) connecting the inducer mounting plate to the heat exchanger center panel. Remove the induced draft blower and the collector box from the unit.
9. Remove the turbulators from inside the heat exchangers by inserting the blade of a screwdriver under the locking tabs. Pop the tabs out of the expanded grooves of the heat exchanger. Slide the turbulators out of the heat exchangers.
10. Direct a water hose into the outlet of the heat exchanger top. Flush the inside of each heat exchanger tube with water. Blow out each tube with air to remove excessive moisture.
11. Reassemble (steps 1 through 9 in reverse order). **Be careful not to strip out the screw holes used to mount the collector box and inducer blower. Replace inducer blower gasket and collector box gasket with factory replacements if damaged.**

▲ WARNING

HOLES IN THE EXHAUST TRANSITION OR HEAT EXCHANGER CAN CAUSE TOXIC FUMES TO ENTER THE HOME. THE EXHAUST TRANSITION OR HEAT EXCHANGER MUST BE REPLACED IF THEY HAVE HOLES OR CRACKS IN THEM. FAILURE TO DO SO CAN CAUSE CARBON MONOXIDE POISONING RESULTING IN PERSONAL INJURY OR DEATH.

The manufacturer recommends that a qualified installer, service agency or the gas supplier visually inspect the burner flames for the desired flame appearance at the beginning of the heating season

and approximately midway in heating season.

The manufacturer also recommends that a qualified installer, service agency or the gas supplier clean the flame sensor with steel wool at the beginning of the heating season.

▲ WARNING

DISCONNECT MAIN ELECTRICAL POWER TO THE UNIT BEFORE ATTEMPTING MAINTENANCE. FAILURE TO DO SO MAY RESULT IN ELECTRICAL SHOCK OR SEVERE PERSONAL INJURY OR DEATH.

LUBRICATION

IMPORTANT: DO NOT attempt to lubricate the bearings on the blower motor or the induced draft blower motor. Addition of lubricants can reduce the motor life and void the warranty.

The blower motor and induced draft blower motor are prelubricated by the manufacturer and do not require further attention.

A qualified installer, service agency or the gas supplier must periodically clean the motors to prevent the possibility of overheating due to an accumulation of dust and dirt on the windings or on the motor exterior. And, as suggested elsewhere in these instructions, the air filters should be kept clean because dirty filters can restrict air flow and the motor depends upon sufficient air flowing across and through it to prevent overheating.

COOLING SECTION MAINTENANCE

▲ WARNING

DISCONNECT MAIN ELECTRICAL POWER TO THE UNIT BEFORE ATTEMPTING MAINTENANCE. FAILURE TO DO SO CAN CAUSE ELECTRICAL SHOCK RESULTING IN SEVERE PERSONAL INJURY OR DEATH.

It is recommended that at the beginning of each cooling season a qualified installer or service agency inspect and clean the cooling section of this unit. The following areas should be addressed: evaporator coil, condenser coil, condenser fan motor and venturi area.

To inspect the evaporator coil:

1. Open the filter access panel and remove filters. Also, remove blower access panel. In downflow applications remove the horizontal return to gain access.

▲ WARNING

LABEL ALL WIRES PRIOR TO DISCONNECTION WHEN SERVICING THE UNIT. WIRING ERRORS CAN CAUSE IMPROPER AND DANGEROUS OPERATION RESULTING IN FIRE, ELECTRICAL SHOCK, PROPERTY DAMAGE, SEVERE PERSONAL INJURY OR DEATH.

2. Shine a flashlight on the evaporator coil (both sides) and inspect for accumulation of lint, insulation, etc.
3. If coil requires cleaning, follow the steps shown below.

Cleaning Evaporator Coil

1. The coil should be cleaned when it is dry. If the coil is coated with dirt or lint, vacuum it with a soft brush attachment. Be careful not to bend the coil fins.
2. If the coil is coated with oil or grease, clean it with a mild detergent-and-water solution. Rinse the coil thoroughly with water. **IMPORTANT: Do not** use excessive water pressure. Excessive water pressure can bend the fins and tubing of the coil and lead to inadequate unit performance. Be careful not to splash water excessively into unit.
3. Inspect the drain pan and condensate drain at the same time the evaporator coil is checked. Clean the drain pan by flushing with water and removing any matters of obstructions which may be present.
4. Go to next section for cleaning the condenser coil.

Cleaning Condenser Coil, Condenser Fan, Circulation Air Blower and Venturi

1. Remove the compressor access panel. Disconnect the wires to the condenser fan motor in the control box (see wiring diagram).
2. The coil should be cleaned when it is dry. If the coil is coated with dirt or lint, vacuum it with a soft brush attachment. Be careful not to bend the coil fins.

3. If the coil is coated with oil or grease, clean it with a mild detergent-and-water solution. Rinse the coil thoroughly with water. **IMPORTANT: Do not** use excessive water pressure. Excessive water pressure can bend the fins and tubing of the coil and lead to inadequate unit performance. Be careful not to splash water excessively into unit.
4. The venturi should also be inspected for items of obstruction such as collections of grass, dirt or spider webs. Remove any that are present.
5. Inspect the circulating air blower wheel and motor for accumulation of lint, dirt or other obstruction and clean it necessary. Inspect the blower motor mounts and the blower housing for loose mounts or other damage. Repair or replace if necessary.

Re-assembly

1. Reconnect fan motor wires per the wiring diagram attached to the back of the cover.
2. Close the filter control and replace the blower/evaporator coil access panels.
3. Replace the control box cover.
4. Restore electrical power to the unit and check for proper operation, especially the condenser fan motor.

REPLACEMENT PARTS

Contact your local distributor for a complete parts list.

TROUBLESHOOTING

Refer to Figures 19 and 20 for determining cause of unit problems.

WIRING DIAGRAMS

Figures 21 through 40 are complete wiring diagrams for the unit and its power sources. Also located on back of compressor access panel.

CHARGING

See pages 46 through 52 for proper charging information.

AIRFLOW PERFORMANCE — RGEDZ*102*

AIRFLOW PERFORMANCE — 8.5 TON [29.9kW] — 60 Hz — DOWNFLOW

| Air Flow CFM [L/s] | External Static Pressure — Inches of Water [kPa] | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--|--|--|
| | 0.1 [0.2] | 0.2 [0.5] | 0.3 [0.7] | 0.4 [1.0] | 0.5 [1.2] | 0.6 [1.5] | 0.7 [1.7] | 0.8 [2.0] | 0.9 [2.2] | 1.0 [2.5] | 1.1 [2.7] | 1.2 [3.0] | 1.3 [3.2] | 1.4 [3.5] | 1.5 [3.7] | 1.6 [4.0] | 1.7 [4.2] | 1.8 [4.5] | 1.9 [4.7] | 2.0 [5.0] | | | | |
| RPM | RPM | RPM | RPM | RPM | RPM | RPM | RPM | RPM | RPM | RPM | RPM | RPM | RPM | RPM | RPM | RPM | RPM | RPM | RPM | RPM | RPM | | | |
| 2700 [1274] | — | 561 [894] | 596 [934] | 631 [975] | 665 [1018] | 698 [1062] | 730 [1108] | 762 [1155] | 793 [1203] | 823 [1253] | 853 [1304] | 882 [1358] | 910 [1411] | 937 [1470] | 964 [1524] | 990 [1583] | 1015 [1643] | 1039 [1704] | 1063 [1767] | 1086 [1832] | 1109 [1900] | | | |
| 2800 [1321] | — | 573 [927] | 608 [969] | 642 [1013] | 676 [1058] | 708 [1104] | 740 [1152] | 771 [1201] | 802 [1252] | 832 [1304] | 861 [1358] | 889 [1413] | 917 [1470] | 943 [1528] | 970 [1587] | 995 [1648] | 1020 [1711] | 1044 [1775] | 1067 [1840] | 1090 [1907] | 1113 [1976] | | | |
| 2900 [1368] | — | 586 [964] | 620 [1008] | 654 [1054] | 687 [1101] | 719 [1150] | 750 [1200] | 781 [1252] | 811 [1305] | 840 [1360] | 869 [1416] | 897 [1473] | 924 [1532] | 950 [1593] | 976 [1654] | 1001 [1718] | 1025 [1782] | 1048 [1848] | 1071 [1916] | 1093 [1985] | 1115 [2056] | | | |
| 3000 [1416] | 564 | 599 [1004] | 633 [1051] | 666 [1099] | 698 [1148] | 730 [1200] | 761 [1254] | 791 [1307] | 820 [1362] | 849 [1419] | 877 [1477] | 904 [1537] | 931 [1598] | 957 [1661] | 982 [1725] | 1006 [1791] | 1030 [1858] | 1053 [1926] | 1075 [1996] | 1097 [2067] | 1119 [2140] | | | |
| 3100 [1463] | 578 | 1001 [1612] | 1048 [1648] | 1098 [1688] | 1148 [1730] | 1198 [1772] | 1248 [1818] | 1298 [1866] | 1348 [1916] | 1398 [1968] | 1448 [2024] | 1498 [2082] | 1548 [2142] | 1598 [2204] | 1648 [2268] | 1698 [2334] | 1748 [2402] | 1798 [2472] | 1848 [2544] | 1898 [2618] | 1948 [2694] | | | |
| 3200 [1510] | 592 | 1046 [1658] | 1096 [1704] | 1146 [1754] | 1196 [1806] | 1246 [1860] | 1296 [1918] | 1346 [1978] | 1396 [2040] | 1446 [2106] | 1496 [2174] | 1546 [2244] | 1596 [2316] | 1646 [2392] | 1696 [2468] | 1746 [2546] | 1796 [2626] | 1846 [2708] | 1896 [2792] | 1946 [2878] | 1996 [2966] | | | |
| 3300 [1557] | 606 | 1096 [1712] | 1148 [1770] | 1202 [1830] | 1257 [1893] | 1312 [1958] | 1367 [2026] | 1422 [2100] | 1477 [2176] | 1532 [2256] | 1587 [2340] | 1642 [2428] | 1697 [2520] | 1752 [2616] | 1807 [2716] | 1862 [2820] | 1917 [2928] | 1972 [3040] | 2027 [3156] | 2082 [3276] | 2137 [3400] | | | |
| 3400 [1604] | 619 | 1149 [1782] | 1202 [1842] | 1257 [1906] | 1312 [1972] | 1367 [2040] | 1422 [2112] | 1477 [2190] | 1532 [2274] | 1587 [2364] | 1642 [2458] | 1697 [2556] | 1752 [2658] | 1807 [2766] | 1862 [2876] | 1917 [2992] | 1972 [3114] | 2027 [3240] | 2082 [3370] | 2137 [3504] | 2192 [3642] | | | |
| 3500 [1652] | 634 | 1206 [1842] | 1261 [1908] | 1317 [1980] | 1374 [2058] | 1431 [2142] | 1488 [2232] | 1545 [2330] | 1602 [2436] | 1659 [2550] | 1716 [2670] | 1773 [2800] | 1830 [2940] | 1887 [3090] | 1944 [3250] | 2001 [3420] | 2058 [3600] | 2115 [3792] | 2172 [4000] | 2229 [4220] | 2286 [4460] | | | |
| 3600 [1699] | 648 | 1267 [1912] | 1324 [1986] | 1382 [2070] | 1441 [2166] | 1499 [2274] | 1558 [2390] | 1617 [2516] | 1676 [2652] | 1735 [2800] | 1794 [2960] | 1853 [3130] | 1912 [3310] | 1971 [3500] | 2030 [3700] | 2089 [3910] | 2148 [4130] | 2207 [4360] | 2266 [4610] | 2325 [4880] | 2384 [5170] | | | |
| 3700 [1746] | 663 | 1332 [1998] | 1391 [2082] | 1451 [2184] | 1512 [2300] | 1573 [2430] | 1634 [2578] | 1695 [2740] | 1756 [2916] | 1817 [3108] | 1878 [3320] | 1939 [3550] | 2000 [3800] | 2061 [4070] | 2122 [4360] | 2183 [4670] | 2244 [5000] | 2305 [5350] | 2366 [5730] | 2427 [6140] | 2488 [6580] | | | |
| 3800 [1793] | 678 | 1400 [2100] | 1461 [2204] | 1523 [2324] | 1586 [2460] | 1649 [2610] | 1712 [2778] | 1775 [2970] | 1838 [3180] | 1901 [3410] | 1964 [3670] | 2027 [3950] | 2090 [4260] | 2153 [4600] | 2216 [5000] | 2279 [5470] | 2342 [6000] | 2405 [6600] | 2468 [7230] | 2531 [7900] | 2594 [8630] | | | |
| 3900 [1840] | 693 | 1472 [2232] | 1536 [2352] | 1600 [2490] | 1665 [2650] | 1730 [2830] | 1795 [3030] | 1860 [3260] | 1925 [3520] | 1990 [3820] | 2055 [4150] | 2120 [4520] | 2185 [4940] | 2250 [5430] | 2315 [6000] | 2380 [6650] | 2445 [7380] | 2510 [8190] | 2575 [9100] | 2640 [10050] | 2705 [11100] | | | |
| 4000 [1888] | 708 | 1548 [2376] | 1614 [2514] | 1680 [2676] | 1747 [2870] | 1814 [3084] | 1881 [3324] | 1948 [3600] | 2015 [3930] | 2082 [4330] | 2149 [4800] | 2216 [5340] | 2283 [5970] | 2350 [6710] | 2417 [7580] | 2484 [8600] | 2551 [9800] | 2618 [11100] | 2685 [12500] | 2752 [14100] | 2819 [15800] | | | |
| 4100 [1935] | 723 | 1628 [2544] | 1697 [2706] | 1767 [2890] | 1837 [3102] | 1907 [3342] | 1977 [3624] | 2047 [3950] | 2117 [4350] | 2187 [4830] | 2257 [5400] | 2327 [6080] | 2397 [6890] | 2467 [7850] | 2537 [8980] | 2607 [10300] | 2677 [11850] | 2747 [13600] | 2817 [15600] | 2887 [17800] | 2957 [20300] | | | |

NOTE: A/F-Drive left of bold line, B/G-Drive right of bold line, C/H-Drive right of double line.

| Drive Package | A/F | B/G | C/H |
|-----------------|------------|------------|------------|
| Motor H.P. [kW] | 2 [1491.4] | 3 [2237.1] | 3 [2237.1] |
| Blower Sheave | AK79H | AK79H | AK79H |
| Motor Sheave | 1V L40*7/8 | 1VP50*7/8 | 1VP56*7/8 |
| Belt | A49 | A50 | A51 |
| Turns Open | 0 | 1 | 2 |
| RPM | 804 | 758 | 710 |
| | | 616 | 559 |
| | | 4 | 5 |
| | | 0 | 1 |
| | | 1048 | 1003 |
| | | 959 | 914 |
| | | 872 | 826 |
| | | 0 | 1 |
| | | 1168 | 1128 |
| | | 1087 | 1044 |
| | | 1002 | 957 |

- 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 pressure.
 4. Drive data shown is for vertical airflow with dry coil. Add component resistance (below) to duct resistance to determine total External Static Pressure.

| Airflow CFM [L/s] | AIRFLOW CORRECTION FACTORS * | | Vertical Economizer RA Damper Open | | Concentric Diffuser RXRN-AEF2000 & Concentric Adapter RXMC-DD01 (Flush) | | Concentric Diffuser RXRN-AED2000 & Concentric Adapter RXMC-DD01 (Drop) | |
|-------------------|------------------------------|--------------|------------------------------------|------------------------------------|---|------------------------------------|--|--|
| | Total MBH | Sensible MBH | Power kW | Resistance — Inches of Water [kPa] | Resistance — Inches of Water [kPa] | Resistance — Inches of Water [kPa] | Resistance — Inches of Water [kPa] | |
| 2700 [1274] | 0.97 | 0.93 | 0.99 | 0.07 [0.2] | 0.03 [0.1] | 0.80 [2.0] | 0.65 [1.6] | |
| 2800 [1321] | 0.98 | 0.94 | 0.99 | 0.07 [0.2] | 0.03 [0.1] | 0.85 [2.1] | 0.69 [1.7] | |
| 2900 [1368] | 0.98 | 0.96 | 0.99 | 0.08 [0.2] | 0.04 [0.1] | 0.91 [2.3] | 0.74 [1.8] | |
| 3000 [1416] | 0.99 | 0.97 | 1.00 | 0.08 [0.2] | 0.05 [0.1] | 0.96 [2.4] | 0.79 [2.0] | |
| 3100 [1463] | 0.99 | 0.99 | 1.00 | 0.09 [0.2] | 0.06 [0.1] | 1.02 [2.5] | 0.86 [2.1] | |
| 3200 [1510] | 1.00 | 1.00 | 1.00 | 0.10 [0.2] | 0.07 [0.2] | 1.08 [2.7] | 0.92 [2.3] | |
| 3300 [1557] | 1.01 | 1.01 | 1.00 | 0.10 [0.2] | 0.08 [0.2] | 1.15 [2.9] | 0.99 [2.5] | |
| 3400 [1604] | 1.01 | 1.03 | 1.01 | 0.11 [0.3] | 0.09 [0.2] | 1.21 [3.0] | 1.05 [2.6] | |
| 3500 [1652] | 1.02 | 1.04 | 1.01 | 0.11 [0.3] | 0.10 [0.2] | 1.29 [3.2] | 1.09 [2.7] | |
| 3600 [1699] | 1.02 | 1.06 | 1.01 | 0.12 [0.3] | 0.11 [0.3] | 1.36 [3.4] | 1.13 [2.8] | |
| 3700 [1746] | 1.03 | 1.07 | 1.02 | 0.13 [0.3] | 0.12 [0.3] | 1.43 [3.6] | 1.18 [2.9] | |
| 3800 [1793] | 1.03 | 1.09 | 1.02 | 0.13 [0.3] | 0.13 [0.3] | 1.50 [3.7] | 1.23 [3.1] | |
| 3900 [1840] | 1.04 | 1.10 | 1.02 | 0.14 [0.4] | 0.15 [0.4] | 1.59 [4.0] | 1.31 [3.3] | |
| 4000 [1888] | 1.05 | 1.12 | 1.03 | 0.14 [0.4] | 0.16 [0.4] | 1.68 [4.2] | 1.38 [3.4] | |
| 4100 [1935] | 1.05 | 1.13 | 1.03 | 0.15 [0.4] | 0.17 [0.4] | 1.74 [4.3] | 1.44 [3.6] | |

* Multiply correction factor times gross performance data — resulting sensible capacity cannot exceed total capacity.

[] Designates Metric Conversions

AIRFLOW PERFORMANCE — RGEDZ*102*

AIRFLOW PERFORMANCE — 8.5 TON [29.9kW] — 60 Hz — SIDEFLOW

Model RGEDZ*102* Voltage 208/230, 460, 575 — 3 phase 60 Hz

| Air Flow CFM [L/s] | | External Static Pressure — Inches of Water [kPa] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------|-----|--|-----|------|-----|------|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.7 | 0.8 | 0.9 | 1.0 | 1.1 | 1.2 | 1.3 | 1.4 | 1.5 | 1.6 | 1.7 | 1.8 | 1.9 | 2.0 | W | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W | RPM | |
| 2700 [1274] | — | — | — | 577 | 932 | 611 | 969 | 644 | 1009 | 677 | 1052 | 710 | 1098 | 742 | 1147 | 774 | 1199 | 806 | 1254 | 837 | 1312 | 868 | 1373 | 898 | 1437 | 929 | 1506 | 959 | 1575 | 988 | 1648 | 1017 | 1725 | 1046 | 1804 | 1074 | 1886 | 1102 | 1972 | |
| 2800 [1321] | — | — | 556 | 926 | 589 | 962 | 622 | 1000 | 655 | 1042 | 687 | 1087 | 719 | 1134 | 751 | 1185 | 783 | 1239 | 814 | 1295 | 844 | 1356 | 875 | 1418 | 905 | 1484 | 934 | 1553 | 963 | 1624 | 992 | 1699 | 1021 | 1777 | 1049 | 1858 | 1077 | 1942 | 1105 | 2029 |
| 2900 [1368] | — | — | 568 | 968 | 601 | 995 | 633 | 1036 | 666 | 1079 | 697 | 1125 | 729 | 1174 | 760 | 1227 | 791 | 1282 | 821 | 1340 | 851 | 1402 | 881 | 1466 | 911 | 1533 | 940 | 1604 | 968 | 1677 | 997 | 1754 | 1025 | 1834 | 1052 | 1916 | 1080 | 2002 | 1107 | 2090 |
| 3000 [1416] | — | — | 580 | 984 | 613 | 1033 | 645 | 1074 | 676 | 1119 | 708 | 1167 | 738 | 1218 | 769 | 1272 | 799 | 1329 | 829 | 1389 | 859 | 1452 | 888 | 1518 | 917 | 1587 | 945 | 1659 | 973 | 1734 | 1001 | 1812 | 1029 | 1894 | 1056 | 1978 | 1082 | 2065 | 1109 | 2155 |
| 3100 [1463] | 561 | 986 | 593 | 1033 | 624 | 1073 | 656 | 1117 | 687 | 1163 | 718 | 1213 | 748 | 1265 | 778 | 1321 | 808 | 1379 | 837 | 1441 | 866 | 1506 | 895 | 1573 | 923 | 1644 | 951 | 1718 | 978 | 1794 | 1006 | 1840 | 1037 | 2024 | 1063 | 2112 | 1088 | 2202 | 1113 | 2286 |
| 3200 [1510] | 574 | 1037 | 605 | 1076 | 638 | 1118 | 667 | 1163 | 698 | 1211 | 728 | 1262 | 758 | 1316 | 787 | 1373 | 816 | 1434 | 845 | 1497 | 873 | 1563 | 902 | 1632 | 929 | 1705 | 951 | 1780 | 984 | 1858 | 1010 | 1940 | 1041 | 2041 | 1066 | 2112 | 1088 | 2202 | 1113 | 2296 |
| 3300 [1557] | 587 | 1082 | 618 | 1122 | 648 | 1166 | 679 | 1212 | 709 | 1262 | 738 | 1315 | 767 | 1371 | 797 | 1429 | 826 | 1489 | 854 | 1553 | 881 | 1624 | 908 | 1695 | 936 | 1769 | 962 | 1846 | 989 | 1926 | 1015 | 2009 | 1041 | 2095 | 1066 | 2184 | 1091 | 2276 | 1116 | 2372 |
| 3400 [1604] | 600 | 1130 | 650 | 1172 | 680 | 1217 | 709 | 1266 | 738 | 1317 | 749 | 1371 | 777 | 1429 | 806 | 1489 | 834 | 1553 | 861 | 1619 | 888 | 1689 | 915 | 1761 | 942 | 1837 | 968 | 1916 | 994 | 1997 | 1020 | 2082 | 1045 | 2170 | 1070 | 2260 | 1094 | 2354 | 1118 | 2451 |
| 3500 [1652] | 613 | 1182 | 643 | 1226 | 672 | 1273 | 702 | 1323 | 730 | 1376 | 759 | 1432 | 787 | 1491 | 815 | 1553 | 842 | 1618 | 869 | 1686 | 896 | 1757 | 922 | 1831 | 948 | 1909 | 974 | 1989 | 999 | 2072 | 1024 | 2168 | 1049 | 2248 | 1073 | 2340 | 1097 | 2436 | 1121 | 2534 |
| 3600 [1699] | 626 | 1238 | 656 | 1283 | 685 | 1332 | 713 | 1383 | 741 | 1438 | 769 | 1495 | 797 | 1556 | 824 | 1620 | 851 | 1687 | 877 | 1756 | 904 | 1829 | 929 | 1905 | 955 | 1984 | 980 | 2066 | 1005 | 2151 | 1029 | 2238 | 1053 | 2328 | 1077 | 2423 | 1100 | 2520 | 1123 | 2621 |
| 3700 [1746] | 640 | 1297 | 668 | 1344 | 697 | 1394 | 725 | 1447 | 753 | 1504 | 780 | 1563 | 807 | 1625 | 833 | 1690 | 860 | 1759 | 886 | 1830 | 911 | 1905 | 937 | 1982 | 961 | 2063 | 986 | 2146 | 1010 | 2233 | 1034 | 2322 | 1057 | 2415 | 1081 | 2510 | 1103 | 2609 | 1126 | 2711 |
| 3800 [1793] | 653 | 1360 | 681 | 1409 | 709 | 1460 | 737 | 1515 | 764 | 1573 | 790 | 1634 | 817 | 1698 | 843 | 1765 | 869 | 1835 | 894 | 1908 | 919 | 1984 | 944 | 2063 | 968 | 2145 | 992 | 2220 | 1016 | 2318 | 1039 | 2410 | 1062 | 2504 | 1084 | 2601 | 1107 | 2701 | 1128 | 2805 |
| 3900 [1840] | 667 | 1426 | 694 | 1477 | 721 | 1530 | 748 | 1567 | 775 | 1646 | 801 | 1709 | 827 | 1774 | 852 | 1843 | 878 | 1914 | 902 | 1989 | 927 | 2067 | 951 | 2147 | 975 | 2231 | 998 | 2318 | 1021 | 2408 | 1044 | 2500 | 1066 | 2596 | 1088 | 2695 | 1110 | 2797 | 1131 | 2902 |
| 4000 [1888] | 680 | 1496 | 707 | 1548 | 734 | 1604 | 760 | 1662 | 786 | 1723 | 812 | 1787 | 837 | 1854 | 862 | 1924 | 887 | 1998 | 911 | 2074 | 935 | 2153 | 958 | 2235 | 981 | 2321 | 1004 | 2409 | 1027 | 2501 | 1049 | 2595 | 1071 | 2693 | 1092 | 2793 | 1113 | 2897 | 1134 | 3003 |
| 4100 [1935] | 694 | 1570 | 720 | 1624 | 746 | 1681 | 772 | 1740 | 797 | 1803 | 822 | 1869 | 847 | 1938 | 872 | 2009 | 896 | 2084 | 919 | 2162 | 943 | 2243 | 965 | 2327 | 988 | 2414 | 1010 | 2504 | 1032 | 2597 | 1054 | 2693 | 1075 | 2792 | 1096 | 2895 | 1116 | 3000 | 1137 | 3108 |

NOTE: AF-Drive left of bold line, B/G-Drive right of bold line, C/H-Drive right of double line.

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------|------------|-----|-----|-----|------------|-----|-----|-----|------------|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Drive Package | AVF | | | | BIG | | | | C/H | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Motor H.P. [kW] | 2 [1491.4] | | | | 3 [2237.1] | | | | 3 [2237.1] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Blower Sheave | AK79H | | | | AK79H | | | | AK79H | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Motor Sheave | 1V4077/8 | | | | 1VP5077/8 | | | | 1VP5677/8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Belt | A49 | | | | A50 | | | | A51 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Turns Open | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| RPM | 802 | 754 | 707 | 662 | 616 | 569 | 522 | 476 | 429 | 383 | 337 | 291 | 244 | 198 | 152 | 106 | 60 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 |

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

| Airflow CFM [L/s] | AIRFLOW CORRECTION FACTORS * | | | | Wet Coil | | | | Horizontal Economizer RA Damper Open | | | | Concentric Diffuser RXRN-AEF2000 & Concentric Adapter RXMC-DD01 (Flush) | | | | Concentric Diffuser RXRN-AED2000 & Concentric Adapter RXMC-DD01 (Drop) | | | |
|-------------------|------------------------------|--------------|----------|----------|------------------------------------|-------------|-------------|-------------|--------------------------------------|-------------|-------------|-------------|---|-------------|-------------|-------------|--|-------------|--|--|
| | Total MBH | Sensible MBH | Power kW | Power kW | Resistance — Inches of Water [kPa] | | | | Resistance — Inches of Water [kPa] | | | | Resistance — Inches of Water [kPa] | | | | Resistance — Inches of Water [kPa] | | | |
| 2700 [1274] | 0.97 | 0.93 | 0.99 | 0.99 | 0.07 [0.02] | 0.07 [0.02] | 0.07 [0.02] | 0.07 [0.02] | 0.03 [0.01] | 0.03 [0.01] | 0.03 [0.01] | 0.03 [0.01] | 0.80 [0.20] | 0.80 [0.20] | 0.65 [0.16] | 0.65 [0.16] | 0.65 [0.16] | 0.65 [0.16] | | |
| 2800 [1321] | 0.98 | 0.94 | 0.99 | 0.99 | 0.07 [0.02] | 0.07 [0.02] | 0.07 [0.02] | 0.07 [0.02] | 0.03 [0.01] | 0.03 [0.01] | 0.03 [0.01] | 0.03 [0.01] | 0.85 [0.21] | 0.85 [0.21] | 0.69 [0.17] | 0.69 [0.17] | 0.69 [0.17] | 0.69 [0.17] | | |
| 2900 [1368] | 0.98 | 0.96 | 0.99 | 0.99 | 0.08 [0.02] | 0.08 [0.02] | 0.08 [0.02] | 0.08 [0.02] | 0.04 [0.01] | 0.04 [0.01] | 0.04 [0.01] | 0.04 [0.01] | 0.91 [0.23] | 0.91 [0.23] | 0.74 [0.18] | 0.74 [0.18] | 0.74 [0.18] | 0.74 [0.18] | | |
| 3000 [1416] | 0.99 | 0.97 | 1.00 | 1.00 | 0.08 [0.02] | 0.08 [0.02] | 0.08 [0.02] | 0.08 [0.02] | 0.05 [0.01] | 0.05 [0.01] | 0.05 [0.01] | 0.05 [0.01] | 0.96 [0.24] | 0.96 [0.24] | 0.79 [0.20] | 0.79 [0.20] | 0.79 [0.20] | 0.79 [0.20] | | |
| 3100 [1463] | 0.99 | 0.99 | 1.00 | 1.00 | 0.09 [0.02] | 0.09 [0.02] | 0.09 [0.02] | 0.09 [0.02] | 0.06 [0.01] | 0.06 [0.01] | 0.06 [0.01] | 0.06 [0.01] | 1.02 [0.25] | 1.02 [0.25] | 0.86 [0.21] | 0.86 [0.21] | 0.86 [0.21] | 0.86 [0.21] | | |
| 3200 [1510] | 1.00 | 1.00 | 1.00 | 1.00 | 0.10 [0.02] | 0.10 [0.02] | 0.10 [0.02] | 0.10 [0.02] | 0.07 [0.02] | 0.07 [0.02] | 0.07 [0.02] | 0.07 [0.02] | 1.08 [0.27] | 1.08 [0.27] | 0.92 [0.23] | 0.92 [0.23] | 0.92 [0.23] | 0.92 [0.23] | | |
| 3300 [1557] | 1.01 | 1.01 | 1.00 | 1.00 | 0.10 [0.03] | 0.10 [0.03] | 0.10 [0.03] | 0.10 [0.03] | 0.08 [0.02] | 0.08 [0.02] | 0.08 [0.02] | 0.08 [0.02] | 1.15 [0.29] | 1.15 [0.29] | 0.99 [0.25] | 0.99 [0.25] | 0.99 [0.25] | 0.99 [0.25] | | |
| 3400 [1604] | 1.01 | 1.03 | 1.01 | 1.01 | 0.11 [0.03] | 0.11 [0.03] | 0.11 [0.03] | 0.11 [0.03] | 0.09 [0.02] | 0.09 [0.02] | 0.09 [0.02] | 0.09 [0.02] | 1.21 [0.30] | 1.21 [0.30] | 1.05 [0.26] | 1.05 [0.26] | 1.05 [0.26] | 1.05 [0.26] | | |
| 3500 [1652] | 1.02 | 1.04 | 1.01 | 1.01 | 0.11 [0.03] | 0.11 [0.03] | 0.11 [0.03] | 0.11 [0.03] | 0.10 [0.02] | 0.10 [0.02] | 0.10 [0.02] | 0.10 [0.02] | 1.29 [0.32] | 1.29 [0.32] | 1.09 [0.27] | 1.09 [0.27] | 1.09 [0.27] | 1.09 [0.27] | | |
| 3600 [1699] | 1.02 | 1.06 | 1.01 | 1.01 | 0.11 [0.03] | 0.11 [0.03] | 0.11 [0.03] | 0.11 [0.03] | 0.11 [0.03] | 0.11 [0.03] | 0.11 [0.03] | 0.11 [0.03] | 1.36 [0.34] | 1.36 [0.34] | 1.13 [0.28] | 1.13 [0.28] | 1.13 [0.28] | 1.13 [0.28] | | |
| 3700 [1746] | 1.03 | 1.07 | 1.02 | 1.02 | 0.13 [0.03] | 0.13 [0.03] | 0.13 [0.03] | 0.13 [0.03] | 0.12 [0.03] | 0.12 [0.03] | 0.12 [0.03] | 0.12 [0.03] | 1.43 [0.36] | 1.43 [0.36] | 1.18 [0.29] | 1.18 [0.29] | 1.18 [0.29] | 1.18 [0.29] | | |
| 3800 [1793] | 1.03 | 1.09 | 1.02 | 1.02 | 0.13 [0.03] | 0.13 [0.03] | 0.13 [0.03] | 0.13 [0.03] | 0.13 [0.03] | 0.13 [0.03] | 0.13 [0.03] | 0.13 [0.03] | 1.50 [0.37] | 1.50 [0.37] | 1.23 [0.31] | 1.23 [0.31] | 1.23 [0.31] | 1.23 [0.31] | | |
| 3900 [1840] | 1.04 | 1.10 | 1.02 | 1.02 | 0.14 [0.04] | 0.14 [0.04] | 0.14 [0.04] | 0.14 [0.04] | 0.15 [0.04] | 0.15 [0.04] | 0.15 [0.04] | 0.15 [0.04] | 1.59 [0.40] | 1.59 [0.40] | 1.31 [0.33] | 1.31 [0.33] | 1.31 [0.33] | 1.31 [0.33] | | |
| 4000 [1888] | 1.05 | 1.12 | 1.02 | 1.02 | 0.15 [0.04] | 0.15 [0.04] | 0.15 [0.04] | 0.15 [0.04] | 0.16 [0.04] | 0.16 [0.04] | 0.16 [0.04] | 0.16 [0.04] | 1.68 [0.42] | 1.68 [0.42] | 1.38 [0.34] | 1.38 [0.34] | 1.38 [0.34] | 1.38 [0.34] | | |
| 4100 [1935] | 1.05 | 1.13 | 1.03 | 1.03 | 0.15 [0.04] | 0.15 [0.04] | 0.15 [0.04] | 0.15 [0.04] | 0.17 [0.04] | 0.17 [0.04] | 0.17 [0.04] | 0.17 [0.04] | 1.74 [0.43] | 1.74 [0.43] | 1.44 [0.36] | 1.44 [0.36] | 1.44 [0.36] | 1.44 [0.36] | | |

* Multiply correction factor times gross performance data — resulting sensible capacity cannot exceed total capacity. [] Designates Metric Conversions

AIRFLOW PERFORMANCE — RGEDZ*120*

AIRFLOW PERFORMANCE — 10 TON [35.1kW] — 60 Hz — DOWNFLOW

| Air Flow CFM [L/s] | | External Static Pressure — Inches of Water [kPa] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------|--------|--|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | | Voltage 208/230, 460, 575 — 3 phase 60 Hz | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.7 | 0.8 | 0.9 | 1.0 | 1.1 | 1.2 | 1.3 | 1.4 | 1.5 | 1.6 | 1.7 | 1.8 | 1.9 | 2.0 | W | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W | RPM | | |
| 3200 | [1510] | 597 | 1046 | 629 | 1092 | 661 | 1141 | 692 | 1191 | 723 | 1242 | 753 | 1296 | 782 | 1351 | 811 | 1409 | 839 | 1468 | 867 | 1528 | 893 | 1591 | 920 | 1655 | 945 | 1722 | 970 | 1790 | 994 | 1869 | 1018 | 1931 | 1041 | 2004 | 1064 | 2080 | 1085 | 2157 | 1107 | 2236 |
| 3300 | [1557] | 610 | 1092 | 642 | 1141 | 674 | 1192 | 705 | 1244 | 735 | 1299 | 764 | 1356 | 793 | 1413 | 822 | 1473 | 849 | 1535 | 876 | 1599 | 903 | 1664 | 928 | 1731 | 954 | 1800 | 978 | 1871 | 1002 | 1943 | 1025 | 2018 | 1048 | 2094 | 1070 | 2172 | 1091 | 2251 | 1112 | 2333 |
| 3400 | [1604] | 624 | 1142 | 655 | 1194 | 686 | 1247 | 717 | 1303 | 747 | 1360 | 776 | 1419 | 804 | 1480 | 832 | 1542 | 859 | 1607 | 886 | 1673 | 912 | 1741 | 937 | 1811 | 962 | 1883 | 986 | 1956 | 1010 | 2031 | 1032 | 2108 | 1055 | 2187 | 1076 | 2268 | 1097 | 2350 | 1117 | 2435 |
| 3500 | [1652] | 638 | 1196 | 669 | 1251 | 699 | 1307 | 729 | 1365 | 759 | 1425 | 787 | 1487 | 815 | 1550 | 843 | 1616 | 870 | 1683 | 896 | 1752 | 921 | 1823 | 946 | 1895 | 971 | 1969 | 994 | 2046 | 1017 | 2124 | 1040 | 2203 | 1061 | 2285 | 1083 | 2368 | 1103 | 2454 | 1123 | 2541 |
| 3600 | [1699] | 651 | 1255 | 682 | 1312 | 712 | 1371 | 742 | 1432 | 771 | 1494 | 799 | 1559 | 827 | 1625 | 854 | 1693 | 880 | 1763 | 906 | 1835 | 931 | 1908 | 955 | 1984 | 979 | 2061 | 1003 | 2140 | 1025 | 2220 | 1047 | 2303 | 1068 | 2387 | 1089 | 2473 | 1109 | 2561 | 1129 | 2651 |
| 3700 | [1746] | 665 | 1317 | 696 | 1377 | 725 | 1439 | 755 | 1503 | 783 | 1568 | 811 | 1635 | 838 | 1704 | 865 | 1775 | 891 | 1848 | 916 | 1922 | 941 | 1998 | 965 | 2076 | 988 | 2156 | 1011 | 2238 | 1033 | 2321 | 1055 | 2406 | 1075 | 2493 | 1096 | 2582 | 1115 | 2673 | 1134 | 2765 |
| 3800 | [1793] | 679 | 1385 | 709 | 1447 | 739 | 1512 | 767 | 1578 | 795 | 1646 | 823 | 1716 | 850 | 1788 | 876 | 1861 | 891 | 1937 | 916 | 2014 | 940 | 2093 | 974 | 2173 | 997 | 2256 | 1019 | 2340 | 1041 | 2426 | 1062 | 2514 | 1083 | 2604 | 1102 | 2696 | 1122 | 2789 | 1140 | 2884 |
| 3900 | [1840] | 693 | 1456 | 723 | 1521 | 752 | 1589 | 780 | 1658 | 808 | 1728 | 835 | 1801 | 861 | 1875 | 887 | 1952 | 912 | 2030 | 936 | 2110 | 960 | 2191 | 983 | 2275 | 1006 | 2360 | 1028 | 2447 | 1049 | 2536 | 1070 | 2627 | 1090 | 2719 | 1109 | 2813 | 1128 | 2909 | 1146 | 3007 |
| 4000 | [1888] | 708 | 1532 | 737 | 1600 | 765 | 1670 | 793 | 1741 | 820 | 1815 | 847 | 1890 | 873 | 1967 | 898 | 2046 | 923 | 2127 | 947 | 2210 | 970 | 2294 | 993 | 2380 | 1015 | 2468 | 1036 | 2558 | 1057 | 2650 | 1077 | 2743 | 1097 | 2838 | 1116 | 2935 | 1134 | 3034 | 1152 | 3135 |
| 4100 | [1935] | 722 | 1612 | 751 | 1682 | 779 | 1755 | 806 | 1830 | 833 | 1906 | 859 | 1984 | 884 | 2064 | 909 | 2145 | 933 | 2229 | 957 | 2314 | 980 | 2401 | 1002 | 2490 | 1024 | 2581 | 1045 | 2673 | 1065 | 2768 | 1085 | 2864 | 1104 | 2962 | 1123 | 3061 | 1141 | 3163 | 1158 | 3266 |
| 4200 | [1982] | 736 | 1696 | 765 | 1769 | 792 | 1845 | 819 | 1922 | 845 | 2001 | 871 | 2082 | 896 | 2164 | 921 | 2249 | 944 | 2336 | 968 | 2423 | 990 | 2513 | 1012 | 2604 | 1033 | 2698 | 1054 | 2793 | 1074 | 2890 | 1093 | 2989 | 1112 | 3090 | 1130 | 3182 | 1147 | 3286 | 1164 | 3402 |
| 4300 | [2029] | 751 | 1784 | 779 | 1861 | 806 | 1939 | 832 | 2019 | 858 | 2100 | 883 | 2184 | 908 | 2269 | 932 | 2356 | 955 | 2445 | 978 | 2536 | 1000 | 2629 | 1022 | 2723 | 1043 | 2819 | 1063 | 2917 | 1082 | 3017 | 1101 | 3118 | 1119 | 3222 | 1137 | 3328 | 1154 | 3434 | | |
| 4400 | [2076] | 765 | 1877 | 793 | 1956 | 820 | 2037 | 846 | 2120 | 871 | 2204 | 896 | 2290 | 920 | 2378 | 944 | 2468 | 967 | 2560 | 989 | 2653 | 1010 | 2749 | 1032 | 2846 | 1052 | 2945 | 1072 | 3045 | 1091 | 3148 | 1109 | 3252 | 1127 | 3358 | 1144 | 3466 | 1161 | 3576 | | |
| 4500 | [2123] | 780 | 1974 | 807 | 2056 | 833 | 2140 | 859 | 2225 | 884 | 2312 | 908 | 2401 | 932 | 2492 | 955 | 2584 | 978 | 2679 | 1000 | 2775 | 1021 | 2873 | 1041 | 2973 | 1061 | 3074 | 1081 | 3178 | 1099 | 3283 | 1117 | 3390 | 1135 | 3499 | 1152 | 3609 | 1168 | 3722 | | |
| 4600 | [2171] | 795 | 2076 | 821 | 2160 | 847 | 2246 | 872 | 2335 | 897 | 2424 | 921 | 2516 | 944 | 2610 | 967 | 2705 | 989 | 2802 | 1010 | 2901 | 1031 | 3002 | 1051 | 3104 | 1071 | 3208 | 1090 | 3314 | 1108 | 3422 | 1126 | 3532 | 1143 | 3644 | 1159 | 3757 | — | — | — | — |
| 4700 | [2218] | 810 | 2181 | 836 | 2269 | 861 | 2358 | 886 | 2448 | 910 | 2541 | 934 | 2635 | 957 | 2732 | 979 | 2830 | 1000 | 2929 | 1021 | 3031 | 1042 | 3134 | 1062 | 3240 | 1081 | 3347 | 1099 | 3455 | 1117 | 3566 | 1134 | 3679 | 1151 | 3793 | 1167 | 3909 | — | — | — | — |
| 4800 | [2265] | 825 | 2291 | 850 | 2381 | 875 | 2473 | 900 | 2567 | 923 | 2662 | 946 | 2759 | 969 | 2858 | 991 | 2959 | 1012 | 3061 | 1033 | 3165 | 1052 | 3272 | 1072 | 3380 | 1090 | 3489 | 1108 | 3601 | 1126 | 3714 | 1143 | 3829 | 1159 | 3946 | — | — | — | — | — | — |

NOTE: A/F-Drive left of bold line, B/G-Drive right of bold line, C/H-Drive right of double line.

| | | | | | | |
|----------------|------------|-----|------------|------|------------|------|
| Drive Package | A/F | | B/G | | C/H | |
| Motor H.P. [W] | 2 [1491.4] | | 3 [2237.1] | | 3 [2237.1] | |
| Blower Sheave | AK79H | | AK79H | | AK79H | |
| Motor Sheave | 1V140*7/8 | | 1VP50*7/8 | | 1VP56*7/8 | |
| Belt | A49 | | A50 | | A51 | |
| Turns Open | 0 | 2 | 3 | 4 | 5 | 0 |
| RPM | 802 | 758 | 710 | 661 | 616 | 559 |
| | | | | 1040 | 999 | 955 |
| | | | | 868 | 824 | 824 |
| | | | | 1155 | 1120 | 1120 |
| | | | | 1080 | 1039 | 996 |
| | | | | 4 | 4 | 5 |
| | | | | 5 | 5 | 953 |

- 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 AHRl minimum External Static Pressure
 4. Drive data shown is for vertical airflow with dry coil. Add component resistance (below) to duct resistance to determine total External Static Pressure.

| Airflow CFM [L/s] | AIRFLOW CORRECTION FACTORS * | | | COMPONENT AIRFLOW RESISTANCE | | | |
|----------------------|------------------------------|--------------|----------|------------------------------------|-----------------------------------|--|-----------------------------------|
| | Total MBH | Sensible MBH | Power kW | Vertical Economizer RA Damper Open | | Concentric Diffuser RXRN-AEF3415 & Diffuser RXMC-DD02 (Drop) | |
| | | | | Wet Coil | Resistance — Inches of Water [Pa] | Concentric Diffuser RXRN-AED3415 & Diffuser RXMC-DD02 | Resistance — Inches of Water [Pa] |
| 3200 [1510] | 0.97 | 0.93 | 0.99 | 0.10 [0.02] | 0.07 [0.02] | 0.74 [1.8] | 0.56 [1.4] |
| 3300 [1557] | 0.98 | 0.94 | 0.99 | 0.10 [0.03] | 0.08 [0.02] | 0.79 [2.0] | 0.59 [1.5] |
| 3400 [1604] | 0.98 | 0.96 | 0.99 | 0.11 [0.03] | 0.09 [0.02] | 0.84 [2.1] | 0.62 [1.5] |
| 3500 [1652] | 0.99 | 0.97 | 1.00 | 0.11 [0.03] | 0.10 [0.02] | 0.90 [2.2] | 0.66 [1.6] |
| 3600 [1699] | 0.99 | 0.98 | 1.00 | 0.12 [0.03] | 0.11 [0.03] | 0.95 [2.4] | 0.69 [1.7] |
| 3700 [1746] | 1.00 | 0.99 | 1.00 | 0.13 [0.03] | 0.12 [0.03] | 1.00 [2.5] | 0.73 [1.8] |
| 3800 [1793] | 1.00 | 1.01 | 1.00 | 0.13 [0.03] | 0.13 [0.03] | 1.04 [2.6] | 0.76 [1.9] |
| 3900 [1840] | 1.01 | 1.02 | 1.00 | 0.14 [0.04] | 0.15 [0.04] | 1.09 [2.7] | 0.80 [2.0] |
| 4000 [1888] | 1.01 | 1.03 | 1.01 | 0.15 [0.04] | 0.16 [0.04] | 1.13 [2.8] | 0.84 [2.1] |
| 4100 [1935] | 1.02 | 1.04 | 1.01 | 0.15 [0.04] | 0.17 [0.04] | 1.19 [3.0] | 0.88 [2.2] |
| 4200 [1982] | 1.02 | 1.06 | 1.01 | 0.16 [0.04] | 0.19 [0.05] | 1.24 [3.1] | 0.92 [2.3] |
| 4300 [2029] | 1.03 | 1.07 | 1.01 | 0.17 [0.04] | 0.20 [0.05] | 1.31 [3.3] | 0.97 [2.4] |
| 4400 [2076] | 1.03 | 1.08 | 1.01 | 0.18 [0.04] | 0.21 [0.05] | 1.37 [3.4] | 1.02 [2.5] |
| 4500 [2123] | 1.04 | 1.09 | 1.02 | 0.19 [0.05] | 0.23 [0.06] | 1.43 [3.5] | 1.07 [2.7] |
| 4600 [2171] | 1.04 | 1.11 | 1.02 | 0.19 [0.05] | 0.24 [0.06] | 1.48 [3.7] | 1.11 [2.8] |
| 4700 [2218] | 1.05 | 1.12 | 1.02 | 0.20 [0.05] | 0.25 [0.06] | 1.54 [3.8] | 1.15 [2.9] |
| 4800 [2265] | 1.05 | 1.13 | 1.02 | 0.21 [0.05] | 0.28 [0.07] | 1.59 [4.0] | 1.19 [3.0] |

* Multiply correction factor times gross performance data — resulting sensible capacity cannot exceed total capacity. [] Designates Metric Conversions

AIRFLOW PERFORMANCE — RGEDZ*120*

AIRFLOW PERFORMANCE — 10 TON [35.1kW] — 60 Hz — SIDEFLOW

| Air Flow CFM [L/s] | External Static Pressure — Inches of Water [kPa] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | Voltage 208/230, 460, 575 — 3 phase 60 Hz | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0.1 [0.03] | 0.2 [0.05] | 0.3 [0.07] | 0.4 [0.10] | 0.5 [0.12] | 0.6 [0.15] | 0.7 [0.17] | 0.8 [0.20] | 0.9 [0.22] | 1.0 [0.25] | 1.1 [0.27] | 1.2 [0.30] | 1.3 [0.32] | 1.4 [0.35] | 1.5 [0.37] | 1.6 [0.40] | 1.7 [0.42] | 1.8 [0.45] | 1.9 [0.47] | 2.0 [0.50] | | | | | | | | | | | | | | | | | | | | |
| 3200 [1510] | 575 | 1018 | 607 | 1143 | 697 | 1191 | 727 | 1240 | 756 | 1293 | 785 | 1348 | 814 | 1406 | 842 | 1466 | 870 | 1529 | 897 | 1585 | 924 | 1664 | 951 | 1735 | 978 | 1809 | 1004 | 1885 | 1030 | 1965 | 1055 | 2047 | 1080 | 2131 | 1105 | 2219 | | | | |
| 3300 [1557] | 588 | 1060 | 618 | 1101 | 649 | 1192 | 708 | 1242 | 737 | 1294 | 766 | 1349 | 795 | 1436 | 823 | 1466 | 850 | 1529 | 878 | 1585 | 905 | 1663 | 932 | 1734 | 958 | 1808 | 984 | 1884 | 1010 | 1963 | 1035 | 2045 | 1060 | 2128 | 1085 | 2216 | 1109 | 2306 | | |
| 3400 [1604] | 600 | 1106 | 630 | 1150 | 660 | 1196 | 690 | 1245 | 719 | 1297 | 748 | 1352 | 776 | 1439 | 803 | 1469 | 832 | 1531 | 859 | 1597 | 886 | 1664 | 913 | 1735 | 939 | 1808 | 965 | 1884 | 990 | 1963 | 1016 | 2044 | 1040 | 2128 | 1065 | 2215 | 1089 | 2305 | 1113 | 2397 |
| 3500 [1652] | 613 | 1156 | 643 | 1202 | 672 | 1251 | 701 | 1302 | 730 | 1357 | 758 | 1413 | 786 | 1473 | 814 | 1535 | 841 | 1600 | 868 | 1668 | 894 | 1738 | 920 | 1811 | 946 | 1887 | 972 | 1965 | 997 | 2046 | 1022 | 2130 | 1046 | 2217 | 1070 | 2306 | 1094 | 2397 | 1117 | 2492 |
| 3600 [1699] | 626 | 1210 | 655 | 1258 | 684 | 1310 | 713 | 1364 | 741 | 1420 | 769 | 1479 | 796 | 1541 | 823 | 1606 | 850 | 1673 | 877 | 1743 | 903 | 1816 | 929 | 1892 | 954 | 1970 | 979 | 2050 | 1004 | 2134 | 1028 | 2220 | 1052 | 2309 | 1076 | 2400 | 1099 | 2494 | 1122 | 2591 |
| 3700 [1746] | 639 | 1268 | 668 | 1319 | 696 | 1373 | 724 | 1429 | 752 | 1488 | 779 | 1550 | 806 | 1614 | 833 | 1661 | 860 | 1751 | 886 | 1823 | 911 | 1898 | 937 | 1976 | 962 | 2056 | 986 | 2140 | 1011 | 2225 | 1035 | 2314 | 1058 | 2405 | 1081 | 2499 | 1104 | 2596 | 1127 | 2695 |
| 3800 [1793] | 652 | 1330 | 680 | 1384 | 708 | 1440 | 736 | 1498 | 763 | 1560 | 790 | 1624 | 817 | 1690 | 843 | 1760 | 869 | 1832 | 895 | 1907 | 920 | 1984 | 945 | 2064 | 970 | 2147 | 994 | 2233 | 1018 | 2321 | 1041 | 2412 | 1064 | 2505 | 1087 | 2602 | 1110 | 2701 | 1132 | 2802 |
| 3900 [1840] | 665 | 1397 | 693 | 1452 | 721 | 1511 | 748 | 1572 | 775 | 1636 | 801 | 1702 | 828 | 1771 | 854 | 1843 | 879 | 1917 | 904 | 1995 | 929 | 2075 | 954 | 2157 | 978 | 2242 | 1001 | 2330 | 1025 | 2421 | 1048 | 2514 | 1071 | 2610 | 1093 | 2709 | 1115 | 2810 | 1137 | 2914 |
| 4000 [1888] | 678 | 1467 | 706 | 1525 | 733 | 1586 | 760 | 1650 | 787 | 1716 | 813 | 1785 | 839 | 1856 | 864 | 1930 | 889 | 2007 | 914 | 2087 | 938 | 2169 | 962 | 2254 | 986 | 2341 | 1009 | 2432 | 1032 | 2525 | 1055 | 2620 | 1077 | 2719 | 1099 | 2820 | 1121 | 2923 | 1142 | 3030 |
| 4100 [1935] | 692 | 1542 | 719 | 1602 | 746 | 1666 | 772 | 1731 | 798 | 1800 | 824 | 1871 | 850 | 1945 | 875 | 2022 | 899 | 2101 | 923 | 2183 | 947 | 2267 | 971 | 2355 | 994 | 2445 | 1017 | 2537 | 1040 | 2633 | 1062 | 2731 | 1084 | 2831 | 1105 | 2935 | 1126 | 3041 | 1147 | 3150 |
| 4200 [1982] | 706 | 1621 | 732 | 1684 | 759 | 1749 | 785 | 1817 | 810 | 1888 | 836 | 1962 | 861 | 2038 | 885 | 2117 | 909 | 2199 | 933 | 2283 | 956 | 2370 | 980 | 2460 | 1003 | 2552 | 1025 | 2647 | 1047 | 2745 | 1069 | 2845 | 1091 | 2948 | 1112 | 3054 | 1132 | 3163 | 1153 | 3274 |
| 4300 [2029] | 720 | 1704 | 746 | 1769 | 772 | 1837 | 797 | 1907 | 823 | 1981 | 847 | 2057 | 872 | 2135 | 896 | 2217 | 920 | 2301 | 943 | 2387 | 966 | 2477 | 989 | 2569 | 1012 | 2664 | 1034 | 2761 | 1055 | 2861 | 1077 | 2964 | 1098 | 3069 | 1118 | 3178 | 1139 | 3288 | 1158 | 3402 |
| 4400 [2076] | 734 | 1791 | 760 | 1858 | 785 | 1928 | 810 | 2001 | 835 | 2077 | 859 | 2155 | 883 | 2237 | 907 | 2320 | 931 | 2407 | 954 | 2496 | 976 | 2587 | 999 | 2682 | 1020 | 2779 | 1042 | 2879 | 1063 | 2981 | 1084 | 3087 | 1105 | 3195 | 1125 | 3305 | 1145 | 3418 | — | — |
| 4500 [2123] | 748 | 1882 | 773 | 1952 | 798 | 2024 | 823 | 2100 | 847 | 2178 | 871 | 2259 | 895 | 2342 | 918 | 2428 | 941 | 2517 | 964 | 2608 | 986 | 2702 | 1008 | 2798 | 1030 | 2899 | 1051 | 3001 | 1071 | 3106 | 1092 | 3214 | 1112 | 3324 | 1132 | 3437 | 1151 | 3552 | — | — |
| 4600 [2171] | 762 | 1977 | 787 | 2049 | 812 | 2124 | 836 | 2202 | 860 | 2283 | 884 | 2366 | 907 | 2451 | 930 | 2540 | 952 | 2631 | 974 | 2725 | 996 | 2822 | 1018 | 2921 | 1039 | 3023 | 1059 | 3127 | 1080 | 3235 | 1100 | 3345 | 1120 | 3457 | 1139 | 3573 | 1158 | 3691 | — | — |
| 4700 [2218] | 777 | 2076 | 801 | 2151 | 836 | 2228 | 849 | 2309 | 873 | 2391 | 896 | 2477 | 919 | 2565 | 941 | 2656 | 963 | 2750 | 985 | 2846 | 1006 | 2945 | 1027 | 3046 | 1048 | 3151 | 1068 | 3258 | 1088 | 3367 | 1108 | 3480 | 1127 | 3595 | 1146 | 3712 | — | — | | |
| 4800 [2265] | 792 | 2180 | 816 | 2257 | 840 | 2337 | 863 | 2419 | 886 | 2504 | 909 | 2592 | 931 | 2683 | 953 | 2776 | 975 | 2872 | 996 | 2971 | 1017 | 3072 | 1037 | 3176 | 1058 | 3283 | 1077 | 3382 | 1097 | 3504 | 1116 | 3619 | 1135 | 3736 | 1153 | 3866 | — | — | | |

NOTE: A/F-Drive left of bold line, B/G-Drive right of bold line, C/H-Drive right of double line.

| Drive Package | A/F | B/G | C/H |
|----------------|------------|------------|------------|
| Motor H.P. [W] | 2 [1491.4] | 3 [2237.1] | 3 [2237.1] |
| Blower Sheave | AK79H | AK79H | AK79H |
| Motor Sheave | 1VL40*7/8 | 1VP56*7/8 | 1VP56*7/8 |
| Belt | A49 | A50 | A51 |
| Turns Open | 0 | 1 | 2 |
| RPM | 798 | 753 | 707 |
| | | | 663 |
| | | | 616 |
| | | | 556 |
| | | | 998 |
| | | | 912 |
| | | | 867 |
| | | | 824 |
| | | | 1155 |
| | | | 1119 |
| | | | 1078 |
| | | | 1037 |
| | | | 994 |
| | | | 951 |

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 A/HRI minimum External Static Pressure

4. Drive data shown is for horizontal airflow with dry coil. Add component resistance (below) to duct resistance to determine total External Static Pressure.

| Airflow CFM [L/s] | AIRFLOW CORRECTION FACTORS * | | Power kW | COMPONENT AIRFLOW RESISTANCE | |
|-------------------|------------------------------|--------------|----------|------------------------------|--------------------------------------|
| | Total MBH | Sensible MBH | | Wet Coil | Horizontal Economizer RA Damper Open |
| 3200 [1510] | 0.97 | 0.93 | 0.99 | 0.10 [0.02] | 0.07 [0.02] |
| 3300 [1557] | 0.98 | 0.94 | 0.99 | 0.10 [0.03] | 0.08 [0.02] |
| 3400 [1604] | 0.98 | 0.96 | 0.99 | 0.11 [0.03] | 0.09 [0.02] |
| 3500 [1652] | 0.99 | 0.97 | 1.00 | 0.11 [0.03] | 0.10 [0.02] |
| 3600 [1699] | 0.99 | 0.98 | 1.00 | 0.12 [0.03] | 0.11 [0.03] |
| 3700 [1746] | 1.00 | 0.99 | 1.00 | 0.13 [0.03] | 0.12 [0.03] |
| 3800 [1793] | 1.00 | 1.01 | 1.00 | 0.13 [0.03] | 0.13 [0.03] |
| 3900 [1840] | 1.01 | 1.02 | 1.00 | 0.14 [0.04] | 0.15 [0.04] |
| 4000 [1888] | 1.01 | 1.03 | 1.01 | 0.15 [0.04] | 0.16 [0.04] |
| 4100 [1935] | 1.02 | 1.04 | 1.01 | 0.15 [0.04] | 0.17 [0.04] |
| 4200 [1982] | 1.02 | 1.06 | 1.01 | 0.16 [0.04] | 0.19 [0.05] |
| 4300 [2029] | 1.03 | 1.07 | 1.01 | 0.17 [0.04] | 0.20 [0.05] |
| 4400 [2076] | 1.03 | 1.08 | 1.01 | 0.18 [0.04] | 0.21 [0.05] |
| 4500 [2123] | 1.04 | 1.09 | 1.02 | 0.19 [0.05] | 0.23 [0.06] |
| 4600 [2171] | 1.04 | 1.11 | 1.02 | 0.19 [0.05] | 0.24 [0.06] |
| 4700 [2218] | 1.05 | 1.12 | 1.02 | 0.20 [0.05] | 0.26 [0.06] |
| 4800 [2265] | 1.05 | 1.13 | 1.02 | 0.21 [0.05] | 0.28 [0.07] |

* Multiply correction factor times gross performance data — resulting sensible capacity cannot exceed total capacity.

[] Designates Metric Conversions

AIRFLOW PERFORMANCE — RGEDZ*150*

AIRFLOW PERFORMANCE — 12.5 TON [43.9kW] — 60 Hz — SIDEFLOW

| Air Flow CFM [L/s] | 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 | | |
| 4000 [1888] | — | 791 | 1757 | 819 | 1824 | 846 | 1892 | 872 | 1961 | 897 | 2031 | 922 | 2101 | 946 | 2173 | 970 | 2245 | 995 | 2318 | 1015 | 2392 | 1036 | 2467 | 1057 | 2542 | 1077 | 2619 | 1096 | 2696 | 1115 | 2774 | 1133 | 2853 | 1150 | 2933 | 1167 | 3014 | 1183 | 3095 | |
| 4100 [1935] | 782 | 1773 | 809 | 1841 | 836 | 1911 | 863 | 1982 | 888 | 2053 | 913 | 2125 | 937 | 2198 | 961 | 2272 | 984 | 2346 | 1006 | 2422 | 1027 | 2498 | 1048 | 2576 | 1068 | 2654 | 1088 | 2733 | 1106 | 2812 | 1124 | 2893 | 1142 | 2975 | 1158 | 3057 | 1174 | 3140 | 1189 | 3224 |
| 4200 [1982] | 801 | 1800 | 828 | 1862 | 854 | 2004 | 880 | 2077 | 905 | 2150 | 929 | 2225 | 952 | 2300 | 975 | 2377 | 997 | 2454 | 1019 | 2532 | 1040 | 2611 | 1060 | 2691 | 1080 | 2771 | 1100 | 2851 | 1116 | 2935 | 1133 | 3018 | 1150 | 3102 | 1166 | 3187 | 1181 | 3272 | 1196 | 3359 |
| 4300 [2029] | 819 | 1854 | 845 | 2028 | 871 | 2102 | 896 | 2177 | 920 | 2254 | 944 | 2331 | 967 | 2409 | 989 | 2488 | 1011 | 2567 | 1032 | 2648 | 1052 | 2729 | 1071 | 2811 | 1090 | 2894 | 1108 | 2978 | 1125 | 3063 | 1142 | 3149 | 1158 | 3236 | 1174 | 3323 | 1188 | 3411 | 1202 | 3500 |
| 4400 [2076] | 837 | 2053 | 863 | 2129 | 888 | 2207 | 912 | 2284 | 936 | 2363 | 959 | 2443 | 981 | 2523 | 1003 | 2603 | 1024 | 2684 | 1044 | 2766 | 1064 | 2848 | 1082 | 2930 | 1101 | 3024 | 1118 | 3110 | 1135 | 3197 | 1151 | 3286 | 1166 | 3375 | 1181 | 3464 | 1195 | 3555 | 1208 | 3646 |
| 4500 [2123] | 855 | 2169 | 880 | 2237 | 905 | 2317 | 929 | 2397 | 952 | 2479 | 974 | 2561 | 996 | 2644 | 1016 | 2727 | 1037 | 2812 | 1056 | 2897 | 1075 | 2984 | 1093 | 3071 | 1111 | 3159 | 1128 | 3248 | 1144 | 3338 | 1159 | 3428 | 1174 | 3520 | 1188 | 3612 | 1201 | 3705 | 1214 | 3799 |
| 4600 [2171] | 873 | 2270 | 898 | 2351 | 921 | 2433 | 944 | 2516 | 967 | 2600 | 988 | 2684 | 1009 | 2770 | 1030 | 2856 | 1049 | 2943 | 1068 | 3031 | 1086 | 3120 | 1104 | 3210 | 1121 | 3300 | 1137 | 3392 | 1152 | 3484 | 1167 | 3577 | 1181 | 3671 | 1195 | 3766 | 1207 | 3861 | 1219 | 3958 |
| 4700 [2218] | 891 | 2387 | 914 | 2471 | 938 | 2556 | 960 | 2641 | 982 | 2727 | 1003 | 2814 | 1023 | 2902 | 1043 | 2991 | 1062 | 3080 | 1080 | 3171 | 1097 | 3262 | 1114 | 3355 | 1130 | 3447 | 1146 | 3541 | 1161 | 3636 | 1175 | 3732 | 1188 | 3828 | 1201 | 3925 | 1213 | 4023 | — | — |
| 4800 [2265] | 908 | 2511 | 931 | 2597 | 954 | 2684 | 975 | 2772 | 996 | 2860 | 1017 | 2950 | 1036 | 3040 | 1055 | 3132 | 1074 | 3224 | 1091 | 3317 | 1108 | 3410 | 1124 | 3505 | 1140 | 3601 | 1155 | 3697 | 1170 | 3794 | 1182 | 3892 | 1195 | 3991 | 1207 | 4091 | 1219 | 4191 | — | — |
| 4900 [2312] | 925 | 2640 | 947 | 2729 | 969 | 2818 | 990 | 2908 | 1011 | 3000 | 1031 | 3092 | 1050 | 3184 | 1068 | 3278 | 1086 | 3373 | 1103 | 3468 | 1119 | 3565 | 1134 | 3662 | 1149 | 3760 | 1163 | 3859 | 1177 | 3958 | 1190 | 4059 | 1202 | 4160 | 1213 | 4262 | — | — | | |
| 5000 [2359] | 942 | 2775 | 964 | 2866 | 985 | 2958 | 1005 | 3051 | 1025 | 3145 | 1044 | 3239 | 1062 | 3335 | 1080 | 3431 | 1097 | 3528 | 1113 | 3628 | 1129 | 3725 | 1144 | 3824 | 1158 | 3925 | 1172 | 4026 | 1185 | 4128 | 1197 | 4231 | 1208 | 4335 | 1219 | 4440 | — | — | | |
| 5100 [2407] | 958 | 2916 | 979 | 3010 | 1000 | 3104 | 1020 | 3200 | 1039 | 3296 | 1057 | 3393 | 1075 | 3491 | 1092 | 3589 | 1108 | 3689 | 1124 | 3789 | 1139 | 3891 | 1153 | 3995 | 1167 | 4096 | 1180 | 4200 | 1192 | 4304 | 1204 | 4410 | 1214 | 4516 | — | — | | | | |
| 5200 [2454] | 975 | 3063 | 995 | 3160 | 1015 | 3258 | 1034 | 3354 | 1053 | 3453 | 1070 | 3552 | 1087 | 3653 | 1104 | 3754 | 1120 | 3856 | 1137 | 3959 | 1149 | 4063 | 1162 | 4167 | 1175 | 4273 | 1188 | 4379 | 1199 | 4486 | 1210 | 4594 | 1224 | 4703 | — | — | | | | |
| 5300 [2501] | 991 | 3217 | 1010 | 3315 | 1030 | 3415 | 1048 | 3515 | 1066 | 3616 | 1083 | 3718 | 1100 | 3821 | 1116 | 3924 | 1130 | 4029 | 1145 | 4134 | 1158 | 4241 | 1171 | 4348 | 1184 | 4456 | 1195 | 4564 | 1206 | 4674 | 1216 | 4785 | — | — | — | — | — | — | | |
| 5400 [2548] | 1006 | 3376 | 1026 | 3477 | 1044 | 3579 | 1062 | 3681 | 1079 | 3785 | 1096 | 3889 | 1111 | 3995 | 1126 | 4101 | 1141 | 4208 | 1155 | 4316 | 1168 | 4425 | 1180 | 4534 | 1192 | 4645 | 1203 | 4756 | 1213 | 4868 | — | — | — | — | — | — | — | — | | |
| 5500 [2595] | 1022 | 3541 | 1040 | 3644 | 1058 | 3749 | 1075 | 3854 | 1092 | 3960 | 1108 | 4072 | 1123 | 4175 | 1137 | 4283 | 1151 | 4393 | 1164 | 4503 | 1177 | 4614 | 1188 | 4726 | 1199 | 4839 | 1210 | 4953 | 1219 | 5068 | — | — | — | — | — | — | — | — | | |
| 5600 [2643] | 1037 | 3712 | 1055 | 3818 | 1072 | 3924 | 1089 | 4032 | 1105 | 4141 | 1120 | 4250 | 1134 | 4361 | 1148 | 4472 | 1161 | 4584 | 1174 | 4697 | 1185 | 4810 | 1196 | 4925 | 1207 | 5040 | 1216 | 5156 | — | — | — | — | — | — | — | — | — | — | | |
| 5700 [2690] | 1053 | 3888 | 1069 | 3987 | 1086 | 4096 | 1102 | 4217 | 1117 | 4328 | 1132 | 4440 | 1145 | 4552 | 1159 | 4666 | 1171 | 4780 | 1183 | 4896 | 1194 | 5012 | 1204 | 5129 | 1214 | 5247 | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 5800 [2737] | 1067 | 4071 | 1083 | 4182 | 1099 | 4294 | 1115 | 4407 | 1129 | 4520 | 1143 | 4635 | 1156 | 4750 | 1169 | 4866 | 1181 | 4983 | 1192 | 5101 | 1202 | 5220 | 1212 | 5339 | 1221 | 5460 | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 5900 [2784] | 1081 | 4260 | 1097 | 4374 | 1113 | 4488 | 1127 | 4603 | 1141 | 4719 | 1154 | 4836 | 1167 | 4954 | 1179 | 5073 | 1190 | 5192 | 1200 | 5312 | 1210 | 5433 | 1219 | 5555 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 6000 [2831] | 1095 | 4455 | 1111 | 4571 | 1126 | 4688 | 1139 | 4805 | 1153 | 4924 | 1165 | 5043 | 1177 | 5164 | 1188 | 5285 | 1199 | 5407 | 1209 | 5529 | 1218 | 5653 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

NOTE: A/F-Drive left of bold line, B/G-Drive right of bold line.

| Drive Package | A | | | | | B | | | | |
|----------------|------------|-----|-----|-----|-----|-------------|-----|-----|-----|-----|
| Motor H.P. [W] | 3 [2237.1] | | | | | 5 [3728.5] | | | | |
| Blower Sheave | AK71H | | | | | AK79H | | | | |
| Motor Sheave | 1VL44*7/8 | | | | | 1VP60*ix1/2 | | | | |
| Belt | A48 | | | | | A52 | | | | |
| Turns Open | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| RPM | 1002 | 955 | 909 | 862 | 813 | 765 | 717 | 670 | 623 | 576 |

- 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 AHR minimum External Static Pressure
 4. Drive data shown is for horizontal airflow with dry coil. Add component resistance (below) to duct resistance to determine total External Static Pressure.

| Airflow CFM [L/s] | AIRFLOW CORRECTION FACTORS * | | Wet Coil | | COMPONENT AIRFLOW RESISTANCE | | | |
|-------------------|------------------------------|--------------|----------------|------------------------------------|---------------------------------|---------------------------------|--------------------|--------------------|
| | Total MBH | Sensible MBH | RA Damper Open | Concentric Diffuser | Horizontal Economizer | Concentric Diffuser | Concentric Adapter | Concentric Adapter |
| | | | | RXMR-AEF3618 & RXMC-DD03 (Flush) | RXMR-AEF3618 & RXMC-DD03 (Drop) | RXMR-AEF3618 & RXMC-DD03 (Drop) | RXMC-DD03 (Flush) | RXMC-DD03 (Drop) |
| | | | | Resistance — Inches of Water [kPa] | | | | |
| 4000 [1888] | 1.01 | 1.03 | 0.15 [04] | 0.16 [04] | 0.16 [04] | 0.16 [04] | 0.16 [04] | 0.68 [17] |
| 4100 [1935] | 1.02 | 1.04 | 0.16 [04] | 0.17 [04] | 0.17 [04] | 0.17 [04] | 0.17 [04] | 0.72 [18] |
| 4200 [1982] | 1.02 | 1.06 | 0.17 [04] | 0.19 [05] | 0.19 [05] | 0.19 [05] | 0.19 [05] | 0.75 [19] |
| 4300 [2029] | 1.03 | 1.07 | 0.17 [04] | 0.20 [05] | 0.20 [05] | 0.20 [05] | 0.20 [05] | 0.79 [20] |
| 4400 [2076] | 1.03 | 1.08 | 0.18 [05] | 0.21 [05] | 0.21 [05] | 0.21 [05] | 0.21 [05] | 0.83 [21] |
| 4500 [2123] | 1.04 | 1.09 | 0.19 [05] | 0.23 [06] | 0.23 [06] | 0.23 [06] | 0.23 [06] | 0.86 [22] |
| 4600 [2171] | 1.04 | 1.11 | 0.20 [05] | 0.24 [06] | 0.24 [06] | 0.24 [06] | 0.24 [06] | 0.89 [22] |
| 4700 [2218] | 1.05 | 1.12 | 0.21 [05] | 0.26 [06] | 0.26 [06] | 0.26 [06] | 0.26 [06] | 0.94 [23] |
| 4800 [2265] | 1.05 | 1.13 | 0.21 [05] | 0.28 [07] | 0.28 [07] | 0.28 [07] | 0.28 [07] | 0.98 [24] |
| 4900 [2312] | 1.06 | 1.14 | 0.22 [06] | 0.29 [07] | 0.29 [07] | 0.29 [07] | 0.29 [07] | 1.01 [25] |
| 5000 [2359] | 1.06 | 1.16 | 0.23 [06] | 0.31 [08] | 0.31 [08] | 0.31 [08] | 0.31 [08] | 1.04 [26] |
| 5100 [2407] | 1.07 | 1.17 | 0.24 [06] | 0.33 [08] | 0.33 [08] | 0.33 [08] | 0.33 [08] | 1.07 [27] |
| 5200 [2454] | 1.07 | 1.18 | 0.25 [06] | 0.35 [09] | 0.35 [09] | 0.35 [09] | 0.35 [09] | 1.10 [27] |
| 5300 [2501] | 1.08 | 1.19 | 0.26 [06] | 0.36 [09] | 0.36 [09] | 0.36 [09] | 0.36 [09] | 1.15 [29] |
| 5400 [2548] | 1.08 | 1.21 | 0.27 [07] | 0.38 [09] | 0.38 [09] | 0.38 [09] | 0.38 [09] | 1.20 [30] |
| 5500 [2595] | 1.09 | 1.22 | 0.28 [07] | 0.40 [10] | 0.40 [10] | 0.40 [10] | 0.40 [10] | 1.25 [31] |
| 5600 [2643] | 1.09 | 1.23 | 0.29 [07] | 0.42 [10] | 0.42 [10] | 0.42 [10] | 0.42 [10] | 1.30 [32] |
| 5700 [2690] | 1.10 | 1.24 | 0.30 [07] | 0.44 [11] | 0.44 [11] | 0.44 [11] | 0.44 [11] | 1.34 [33] |
| 5800 [2737] | 1.10 | 1.25 | 0.31 [08] | 0.46 [11] | 0.46 [11] | 0.46 [11] | 0.46 [11] | 1.38 [34] |
| 5900 [2784] | 1.10 | 1.27 | 0.32 [08] | 0.48 [12] | 0.48 [12] | 0.48 [12] | 0.48 [12] | 1.42 [35] |
| 6000 [2831] | 1.11 | 1.28 | 0.33 [08] | 0.51 [13] | 0.51 [13] | 0.51 [13] | 0.51 [13] | 1.45 [36] |

* Multiply correction factor times gross performance data — resulting sensible capacity cannot exceed total capacity. [] Designates Metric Conversions

FIGURE 19 COOLING TROUBLESHOOTING CHART

▲ WARNING

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

| SYMPTOM | POSSIBLE CAUSE | REMEDY |
|--|--|--|
| Unit will not run | <ul style="list-style-type: none"> • Power off or loose electrical connection • Thermostat out of calibration-set too high • Failed contactor • Blown fuses • Transformer defective • High pressure control open (if provided) • Interconnecting low voltage wiring damaged | <ul style="list-style-type: none"> • Check for correct voltage at compressor contactor in control box • Reset • Check for 24 volts at contactor coil - replace if contacts are open • Replace fuses • Check wiring-replace transformer • Reset-also see high head pressure remedy-The high pressure control opens at 450 PSIG • Replace thermostat wiring |
| Condenser fan runs, compressor doesn't | <ul style="list-style-type: none"> • Loose connection • Compressor stuck, grounded or open motor winding open internal overload. • Low voltage condition • Low voltage condition | <ul style="list-style-type: none"> • 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. • Add start kit components |
| Insufficient cooling | <ul style="list-style-type: none"> • Improperly sized unit • Improper airflow • Incorrect refrigerant charge • Air, non-condensibles or moisture in system • Incorrect voltage | <ul style="list-style-type: none"> • Recalculate load • Check - should be approximately 400 CFM per ton. • Charge per procedure attached to unit service panel. • Recover refrigerant, evacuate & recharge, add filter drier • At compressor terminals, voltage must be within 10% of rating plate volts when unit is operating. |
| Compressor short cycles | <ul style="list-style-type: none"> • Incorrect voltage • Defective overload protector • Refrigerant undercharge | <ul style="list-style-type: none"> • At compressor terminals, voltage must be \pm 10% of nameplate marking when unit is operating. • Replace - check for correct voltage • Add refrigerant |
| Registers sweat | <ul style="list-style-type: none"> • Low evaporator airflow | <ul style="list-style-type: none"> • Increase speed of blower or reduce restriction - replace air filter |
| High head-low vapor pressures | <ul style="list-style-type: none"> • Restriction in liquid line, expansion device or filter drier • Flow check piston size too small • Incorrect capillary tubes • TXV does not open | <ul style="list-style-type: none"> • Remove or replace defective component • Change to correct size piston • Change coil assembly • Replace TXV |
| High head-high or normal vapor pressure - Cooling mode | <ul style="list-style-type: none"> • Dirty condenser coil • Refrigerant overcharge • Condenser fan not running • Air or non-condensibles in system | <ul style="list-style-type: none"> • Clean coil • Correct system charge • Repair or replace • Recover refrigerant, evacuate & recharge |
| Low head-high vapor pressures | <ul style="list-style-type: none"> • Defective Compressor valves • Incorrect capillary tubes | <ul style="list-style-type: none"> • Replace compressor • Replace coil assembly |
| Low vapor - cool compressor - iced evaporator coil | <ul style="list-style-type: none"> • Low evaporator airflow • Operating below 65°F outdoors • Moisture in system | <ul style="list-style-type: none"> • Increase speed of blower or reduce restriction - replace air filter • Add Low Ambient Kit • Recover refrigerant - evacuate & recharge - add filter drier |
| High vapor pressure | <ul style="list-style-type: none"> • Excessive load • Defective compressor | <ul style="list-style-type: none"> • Recheck load calculation • Replace |
| Fluctuating head & vapor pressures | <ul style="list-style-type: none"> • TXV hunting • Air or non-condensibles in system | <ul style="list-style-type: none"> • Check TXV bulb clamp - check air distribution on coil - replace TXV • Recover refrigerant, evacuate & recharge |
| Gurgle or pulsing noise at expansion device or liquid line | <ul style="list-style-type: none"> • Air or non-condensibles in system | <ul style="list-style-type: none"> • Recover refrigerant, evacuate & recharge |

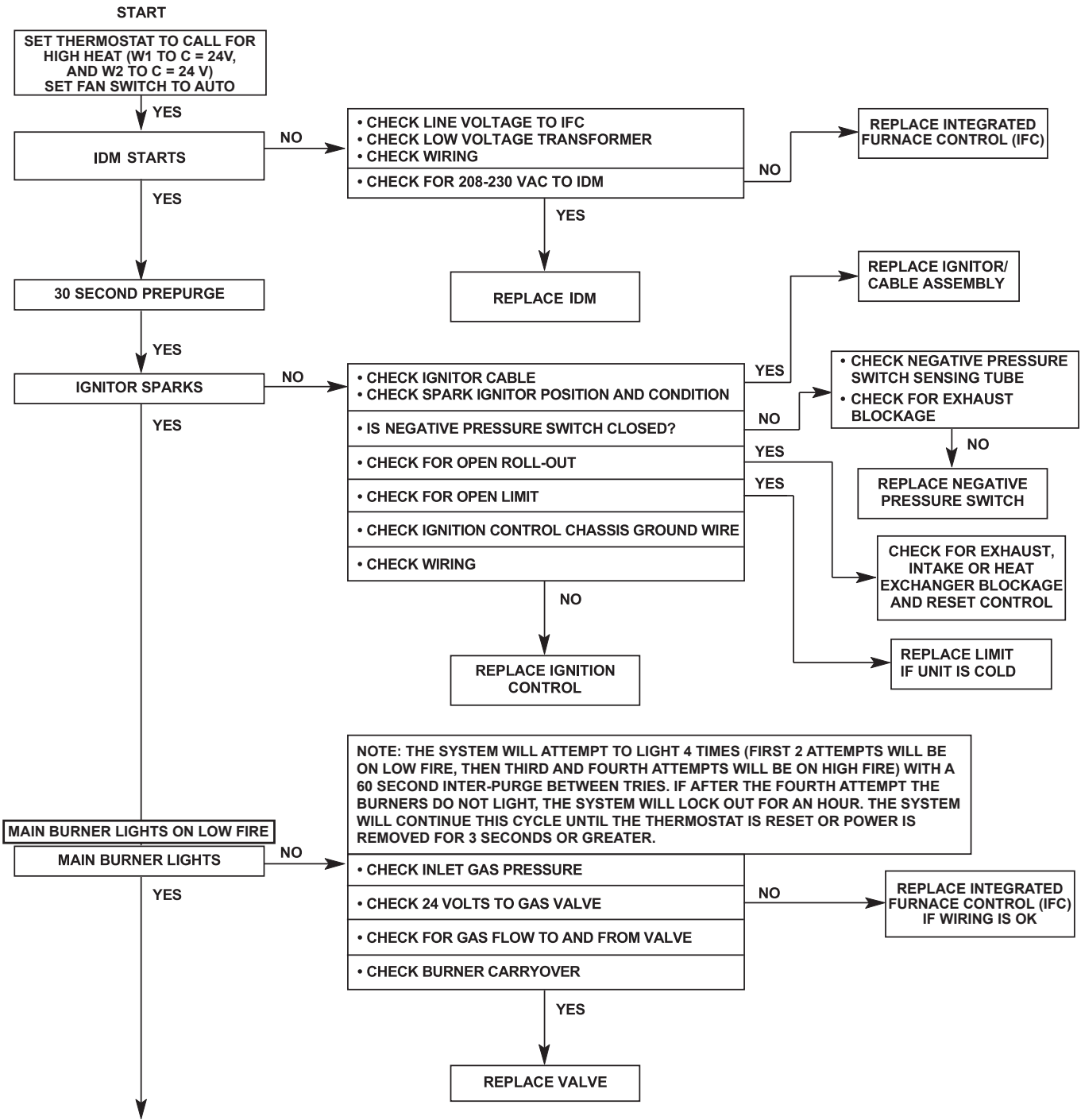
FIGURE 20
FURNACE TROUBLESHOOTING GUIDE
 (COMBINATION HEATING AND COOLING UNITS WITH DIRECT SPARK IGNITION)

⚠ WARNING



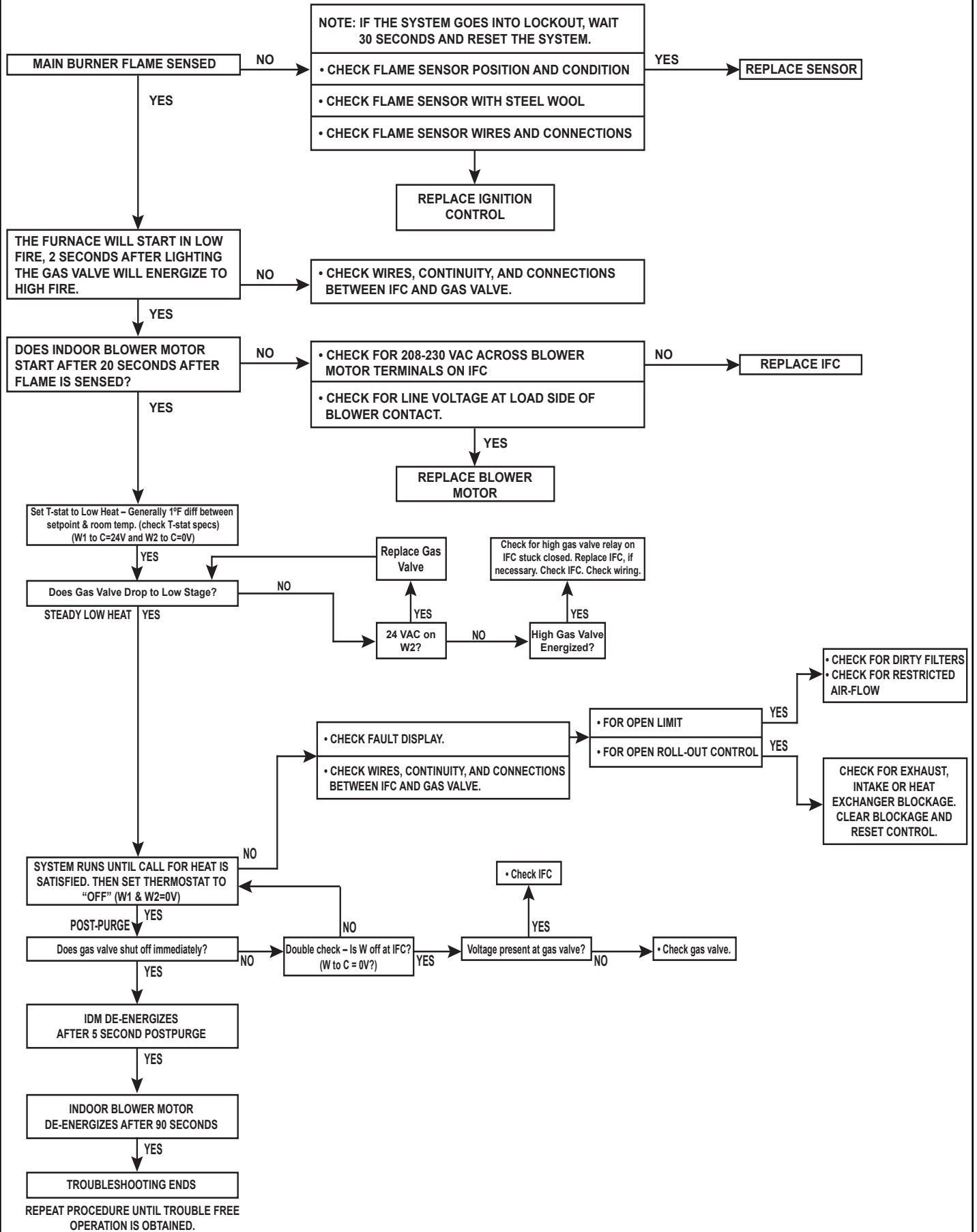
HAZARDOUS VOLTAGE
 LINE VOLTAGE CONNECTIONS

DISCONNECT POWER BEFORE SERVICING.
 SERVICE MUST BE BY A TRAINED, QUALIFIED SERVICE TECHNICIAN.



FLOW CHART CONTINUED ON NEXT PAGE

FLOW CHART CONTINUED FROM LAST PAGE



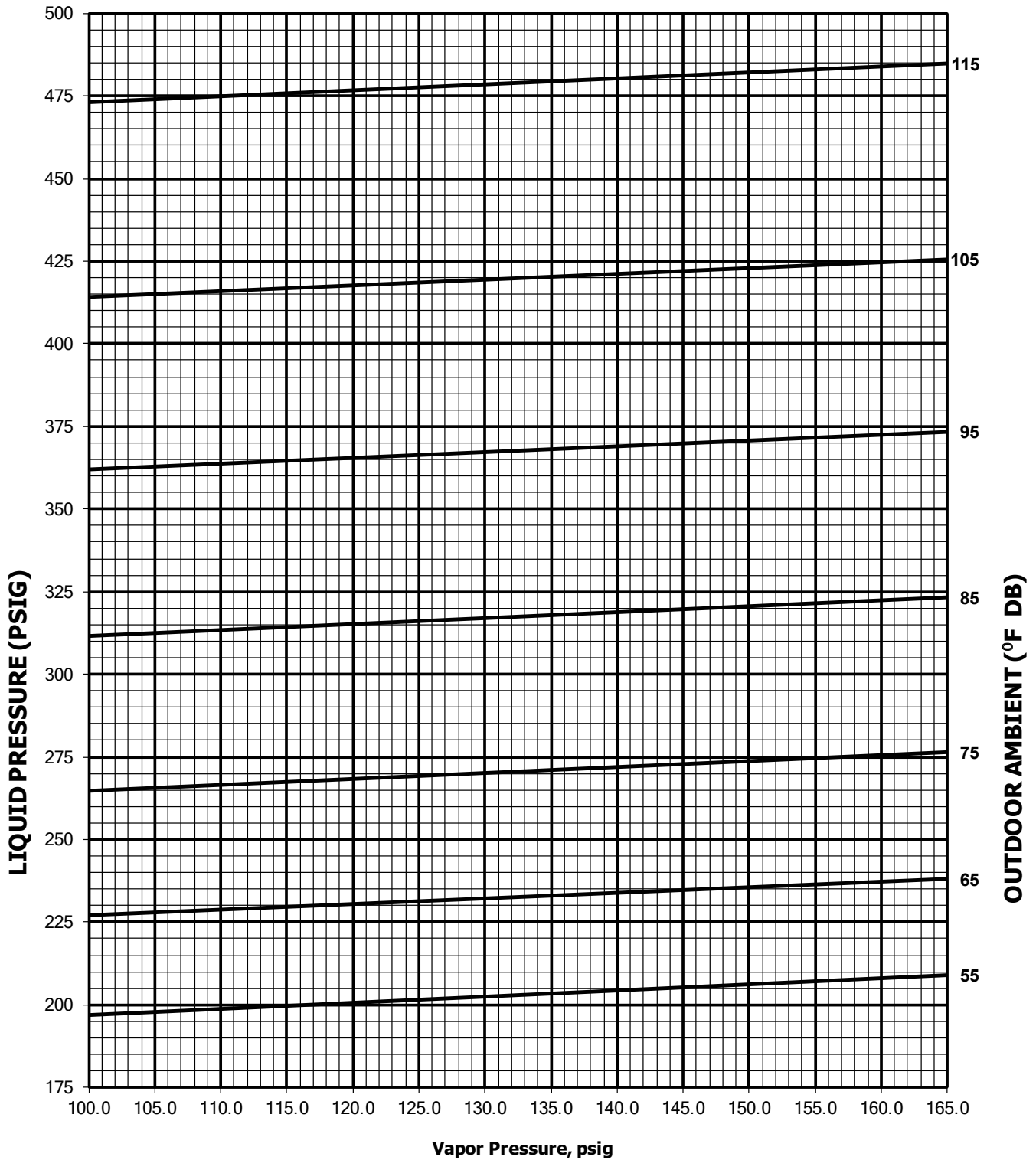
IFC Alarm Codes

| CODE | Description | FAULT LEVEL -0,1,2,3* |
|------|--|--------------------------|
| 0 | STANDBY | 0 |
| c | COMPRESSOR ON – Low (Flashing if in time delay) | 0 |
| C | COMPRESSOR ON – High (Flashing if in time delay) | 0 |
| E | Economizer Cooling – No Compressor | 0 |
| F | CONTINUOUS FAN | 0 |
| h | HEAT ON – Low Stage | 0 |
| H | GAS HEAT ON – High Stage | 0 |
| 4 | Comfort Alert Code 4 for Compressor Circuit 1 | 3 |
| 5 | Comfort Alert Code 5 for Compressor Circuit 1 | 3 |
| 6 | Comfort Alert Code 6 for Compressor Circuit 1 | 3 |
| 7 | Comfort Alert Code 7 for Compressor Circuit 1 | 3 |
| 8 | Comfort Alert Code 8 for Compressor Circuit 1 | 3 |
| 9 | Comfort Alert Code 9 for Compressor Circuit 1 | 3 |
| 11 | FAILED IGNITION | 2 |
| 12 | LO FLAME SENSE | 1 |
| 13 | FLAME LOST | 2 |
| 14 | UNEXPECTED FLAME | 3 |
| 15 | 2 nd Stage Gas valve improper voltage | 2 |
| 20 | REFRIGERANT LOW PRESSURE SWITCH OPEN – CIRCUIT 1 | 2 |
| 21 | REFRIGERANT LOW PRESSURE SWITCH OPEN – CIRCUIT 2 | 2 |
| 22 | MAIN LIMIT OPEN | 2 |
| 29 | REFRIGERANT HIGH PRESSURE SWITCH OPEN – CIRCUIT 1 | 2 |
| 30 | REFRIGERANT HIGH PRESSURE SWITCH OPEN – CIRCUIT 2 | 2 |
| 33 | MRLC (Rollout Limit) OPEN | 2 |
| 34 | Comfort Alert Code 4 for Compressor Circuit 2 | 3 |
| 35 | Comfort Alert Code 5 for Compressor Circuit 2 | 3 |
| 36 | Comfort Alert Code 6 for Compressor Circuit 2 | 3 |
| 37 | Comfort Alert Code 7 for Compressor Circuit 2 | 3 |
| 38 | Comfort Alert Code 8 for Compressor Circuit 2 | 3 |
| 39 | Comfort Alert Code 9 for Compressor Circuit 2 | 3 |
| 42 | Invalid Thermostat Selection | 1 |
| 44 | 1 st Stage COMBUSTION PRESS SWITCH CLOSED | 2 |
| 46 | 1 st Stage COMBUSTION PRESS SWITCH OPEN | 2 |
| 49 | FREEZE SWITCH OPEN – CIRCUIT 1 | 2 |
| 50 | FREEZE SWITCH OPEN – CIRCUIT 2 | 2 |
| 55 | 2 nd Stage COMBUSTION PRESS SWITCH CLOSED | 2 |
| 57 | 2 nd Stage COMBUSTION PRESS SWITCH OPEN | 2,3 |
| 59 | Condensate Drain Plugged | 3 |
| 61 | Blower Fault – NO RUN | 3 |
| 83 | Condenser Coil Temp Sensor Fail-OCT | 2 |
| 84 | Outdoor Air Temperature Sensor Fail-OAT | 2 |
| 88 | Emergency Stop Fault | 3 |
| 93 | CONTROL Fault | 3 |
| 97 | Smoke Detection | 3 |

*Fault levels: 0 = none, 1=warning, 2= problem, 3=shutdown

SYSTEM CHARGE CHART - REFRIGERANT 410A

7.5 TON

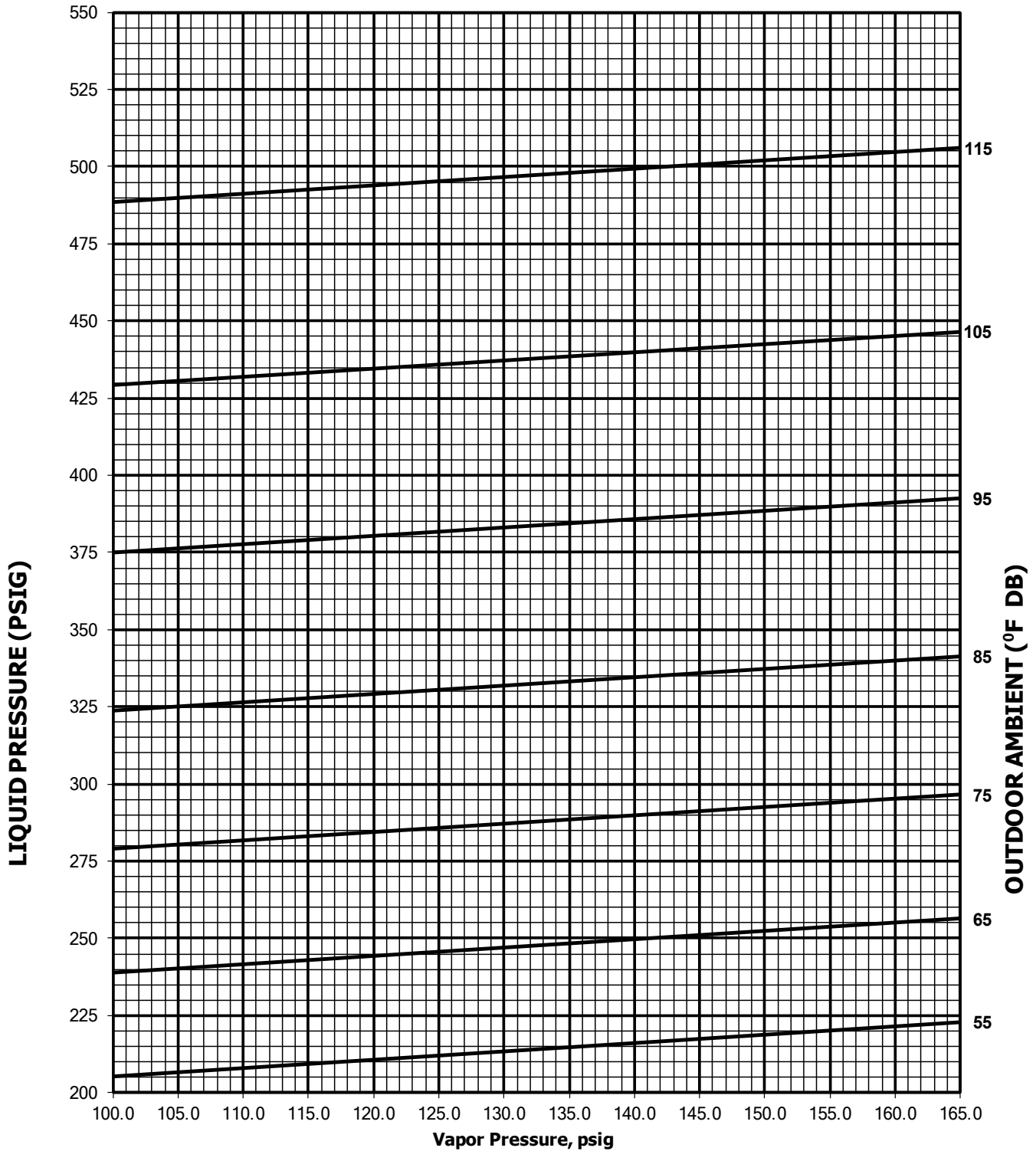


CAUTION: 1. RETURN AIR TEMPERATURE MUST BE WITHIN COMFORT CONDITIONS BEFORE FINAL REFRIGERANT CHECK!

- 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.

SYSTEM CHARGE CHART - REFRIGERANT 410A

8.5 TON



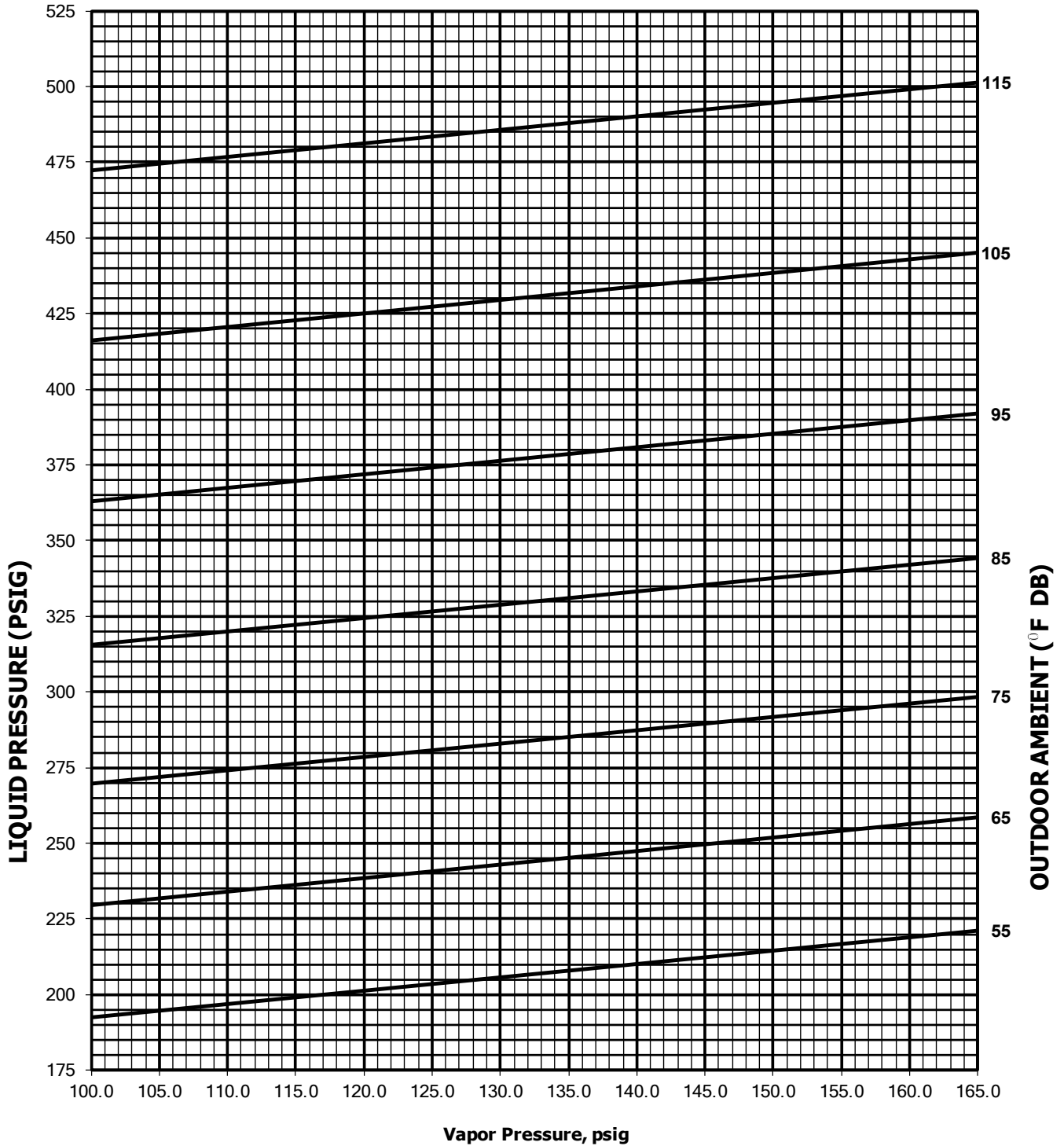
CAUTION: 1. RETURN AIR TEMPERATURE MUST BE WITHIN COMFORT CONDITIONS BEFORE FINAL REFRIGERANT CHECK!

- 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.

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SYSTEM CHARGE CHART - REFRIGERANT 410A

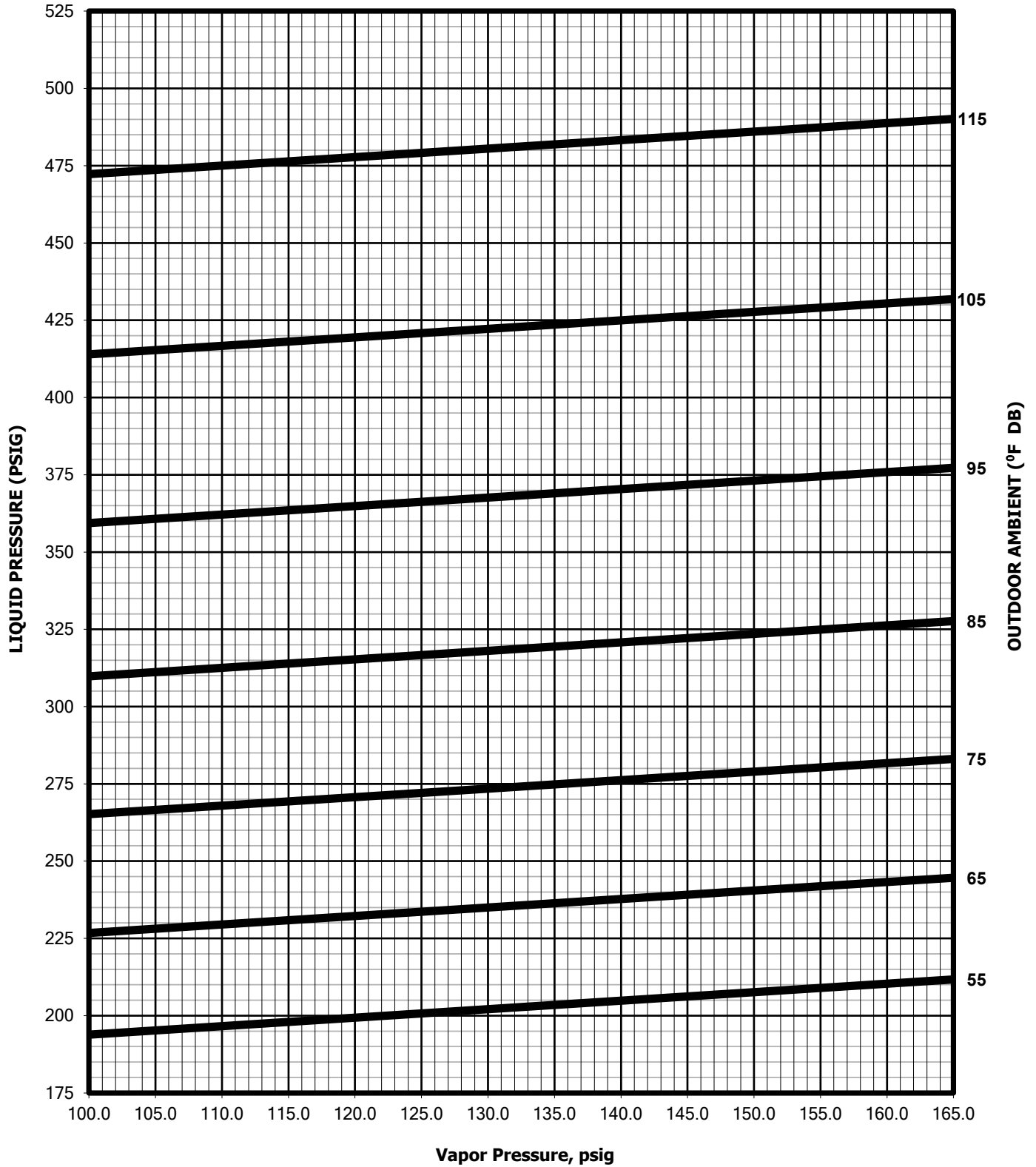
10 TON



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.

12.5-Ton AC Charging Chart



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.

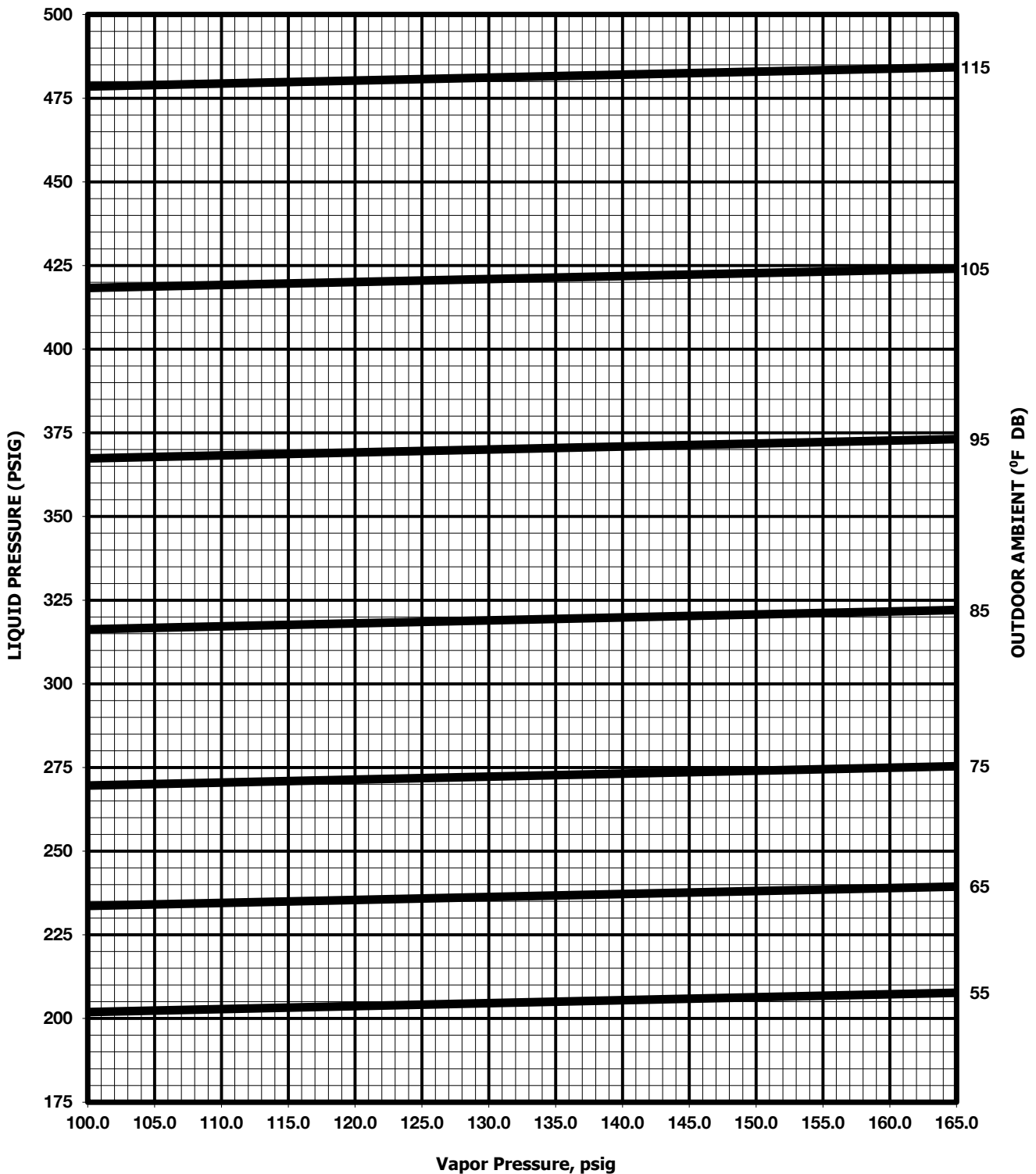
3. PLACE X ON CHART WHERE SUCTION AND LIQUID INTERSECT.

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.

92-106138-04-00

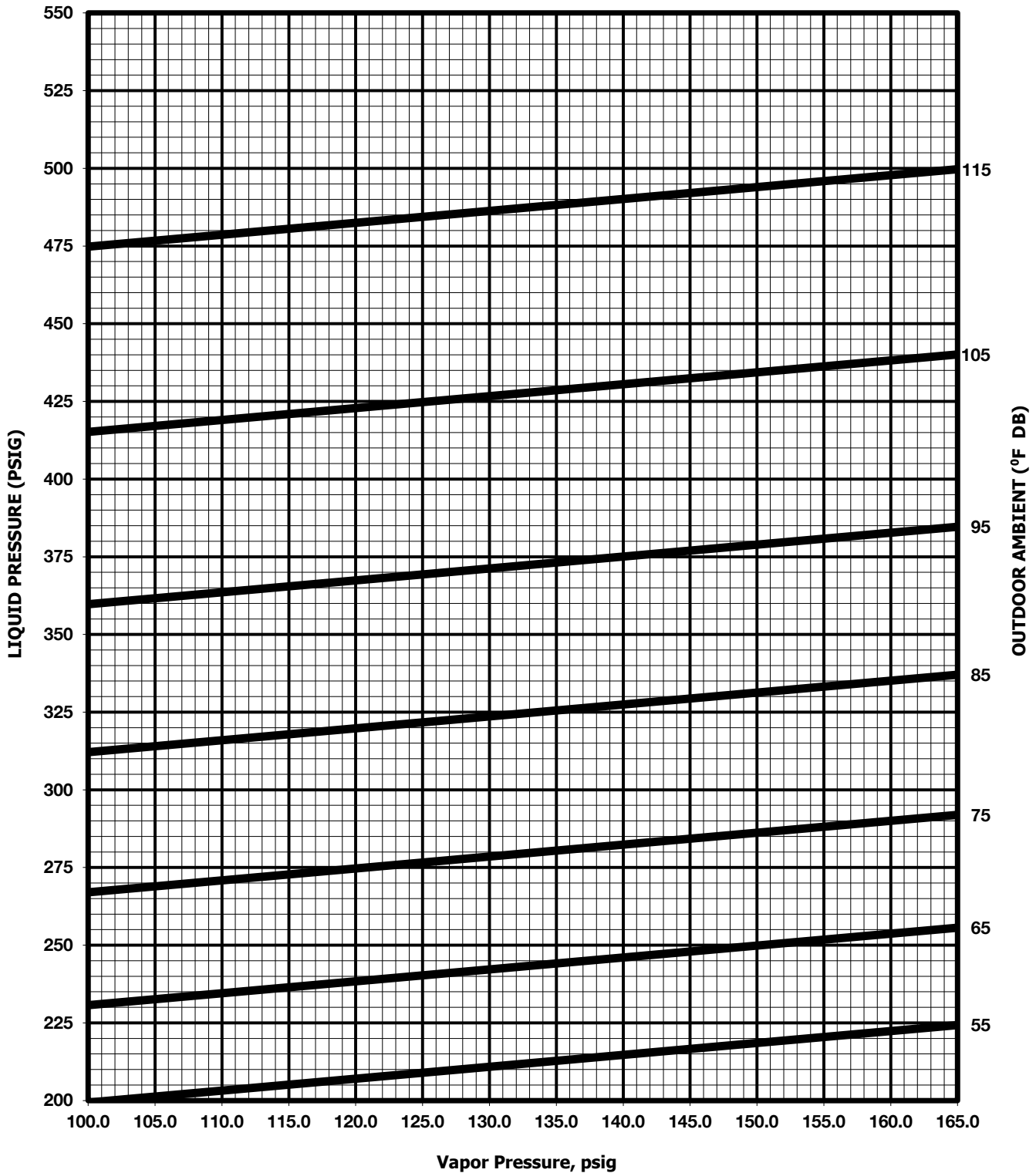
7.5 Ton 2 - Stage AC Charging Chart



- 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.

92-106138-09-00

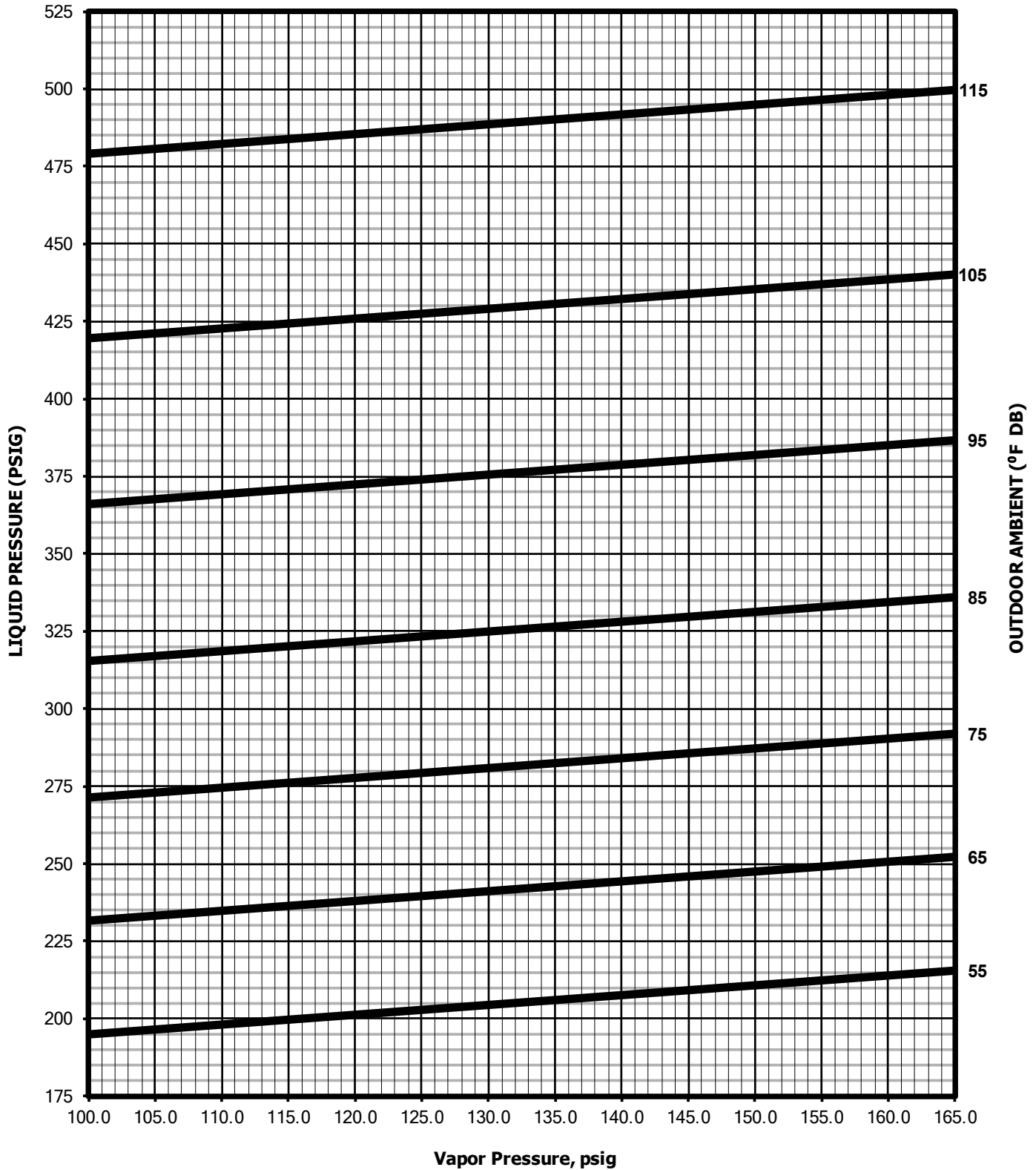
8.5 Ton 2 - Stage AC Charging Chart



- 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.

92-106138-10-00

10-Ton 2 Stage AC Charging Chart



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.

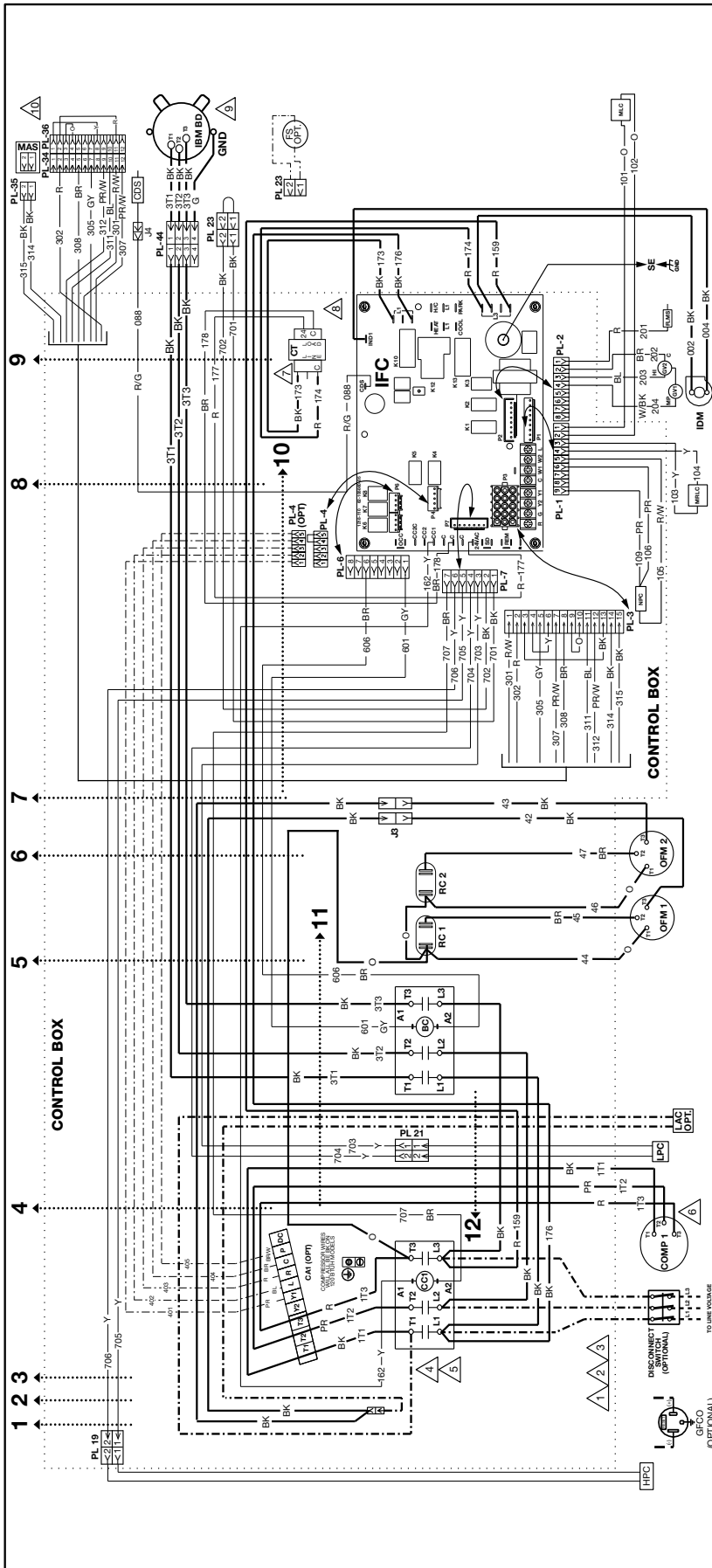
3. PLACE X ON CHART WHERE SUCTION AND LIQUID INTERSECT.

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.

92-106138-11-00

FIGURE 21



| WIRING INFORMATION | NOTES | COMPONENT CODES | WIRE COLOR CODE | | | | | | | | | | | | |
|--|--|-----------------|-----------------|----------|-----|----------|-----|--------------|-----|----------|-----|----------|-----|---|---|
| <p>LINE VOLTAGE _____</p> <p>-FACTORY STANDARD _____</p> <p>-FACTORY OPTION _____</p> <p>-FIELD INSTALLED _____</p> <p>LOW VOLTAGE _____</p> <p>-FACTORY STANDARD _____</p> <p>-FACTORY OPTION _____</p> <p>-FIELD INSTALLED _____</p> <p>REPLACEMENT WIRE _____</p> <p>BE USED AS GENERAL (100'S MIN.) _____</p> <p>WARNING: REPLACEMENT WIRE MUST BE PERMANENTLY GROUNDED AND CONFORM TO I.E.C., N.E.C., C.E.C., AND LOCAL REGULATIONS, AND LOCAL CODES AS APPLICABLE.</p> | <p>1. CONNECTORS SUITABLE FOR USE WITH COPPER CONDUCTORS ONLY.</p> <p>2. CONNECT FIELD WIRING IN GROUNDED RAIN TIGHT CONDUIT TO PLUGS DISCONNECT.</p> <p>3. REMOVE ISAT (CC) TO INSTALL COMPRESSOR CONTACTOR (CC).</p> <p>4. REMOVE ISAT (CC) TO INSTALL LOW AMBIENT ACCESSORY.</p> <p>5. COMPRESSOR MOTOR THERMALLY PROTECTED, ALL 3 PHASE MODELS ARE PROTECTED UNDER PRIMARY SINGLE PHASE CONDITIONS.</p> <p>6. TRANSFORMER FACTORY WIRING AS SHOWN BELOW. CHANGE PRIMARY VOLTAGE TO MATCH LOCAL SERVICE VOLTAGE. TRANSFORMER TAPING:</p> <table border="1"> <tr><td>200-220-50HZ</td><td>230</td></tr> <tr><td>208-60HZ</td><td>230</td></tr> <tr><td>230-60HZ</td><td>230</td></tr> <tr><td>380-415-50HZ</td><td>400</td></tr> <tr><td>460-60HZ</td><td>480</td></tr> <tr><td>575-60HZ</td><td>230</td></tr> </table> <p>7. TRANSFORMER FACTORY WIRING AS SHOWN BELOW. CHANGE PRIMARY VOLTAGE TO MATCH LOCAL SERVICE VOLTAGE.</p> <p>8. LOW VOLTAGE CIRCUIT IS I.E.C. CLASS 2 WITH A CLASS 2 TRANSFORMER (AS SUPPLIED).</p> <p>9. MOTOR FACTORY WIRING FOR CORRECT VOLTAGE.</p> <p>10. REMOVE PLUG FOR ECONOMIZER ACCESSORY.</p> <p>PL34 AND PL36 LOCATED IN RETURN AIR SECTION.</p> | 200-220-50HZ | 230 | 208-60HZ | 230 | 230-60HZ | 230 | 380-415-50HZ | 400 | 460-60HZ | 480 | 575-60HZ | 230 | <p>LFC LOW PRESSURE CONTROL</p> <p>MAS MAXI-SEAL MOTOR</p> <p>MRLC MANUAL RESET LIMIT CONTROL</p> <p>QAT OUTDOOR AIR TEMPERATURE SWITCH</p> <p>ORV OUTDOOR RAIN MOTOR</p> <p>PT POWER TRANSFORMER</p> <p>R 1-240 RESISTOR</p> <p>RC REVERSING SWITCH</p> <p>TC THERMISTOR</p> <p>TR USE TRANSISTOR</p> <p>↑ WIRE TIE</p> <p>□ GROUND LUG</p> <p>○ GROUNDING</p> <p>○ GAS VALVE</p> <p>○ INDUCED DRAFT MOTOR</p> <p>○ INDOOR BLOWER MOTOR</p> <p>○ JUMPER</p> <p>○ LOW AMBIENT CONTROL</p> | <p>BK...BLACK</p> <p>BR...BROWN</p> <p>BL...BLUE</p> <p>GY...GRAY</p> <p>OR...ORANGE</p> <p>WH...WHITE</p> <p>Y...YELLOW</p> <p>PL...PURPLE</p> <p>RD...RED</p> |
| 200-220-50HZ | 230 | | | | | | | | | | | | | | |
| 208-60HZ | 230 | | | | | | | | | | | | | | |
| 230-60HZ | 230 | | | | | | | | | | | | | | |
| 380-415-50HZ | 400 | | | | | | | | | | | | | | |
| 460-60HZ | 480 | | | | | | | | | | | | | | |
| 575-60HZ | 230 | | | | | | | | | | | | | | |
| <p>ELECTRICAL WIRING DIAGRAM</p> <p>GE NON DDC 1 STG 080/102/120</p> <p>208/230/380/460V, 3PH, 60HZ</p> <p>GE NON DDC 1 STG 072/090/102</p> <p>380-415V, 3PH, 50HZ</p> | <p>APPROVED: _____</p> <p>MODELED BY: TEW</p> <p>DATE: 10-17-17</p> <p>PART NO.: 90-106177-01</p> <p>REV: 02</p> <p>CHECKED: _____</p> <p>NO.: _____</p> <p>ORIGINAL RELEASE: R-107150/99</p> | | | | | | | | | | | | | | |

FIGURE 22

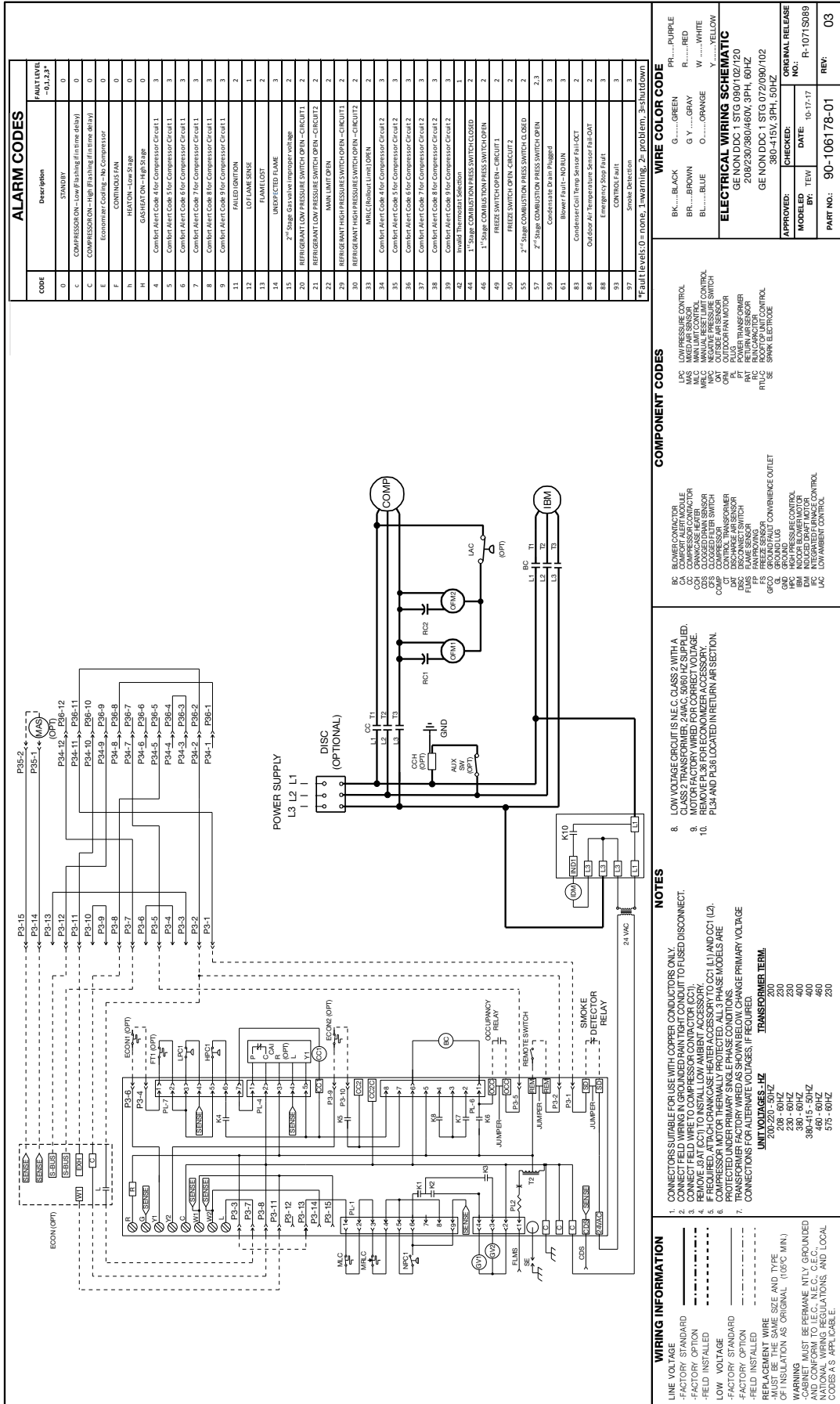
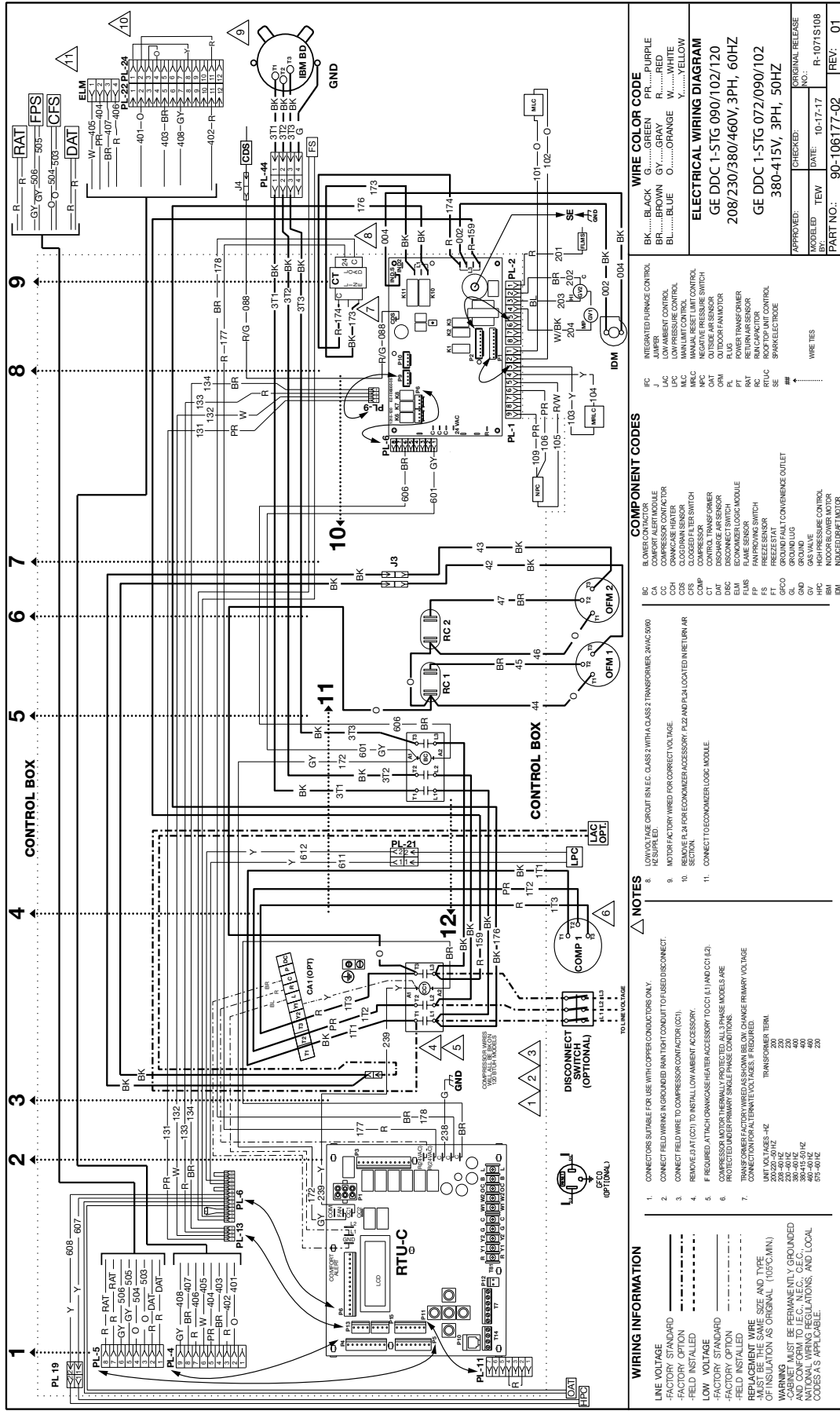


FIGURE 23



WIRE COLOR CODE

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

ELECTRICAL WIRING DIAGRAM

GE DDC 1-STG 090/102/120
208/230/380/460V, 3PH, 60HZ

GE DDC 1-STG 072/090/102
380-415V, 3PH, 50HZ

APPROVED: _____
CHECKED: _____
NO.: _____
DATE: 10-17-17
R-1071S108

MOBBLED: TEW
PART NO.: 90-106177-02
REV: 01

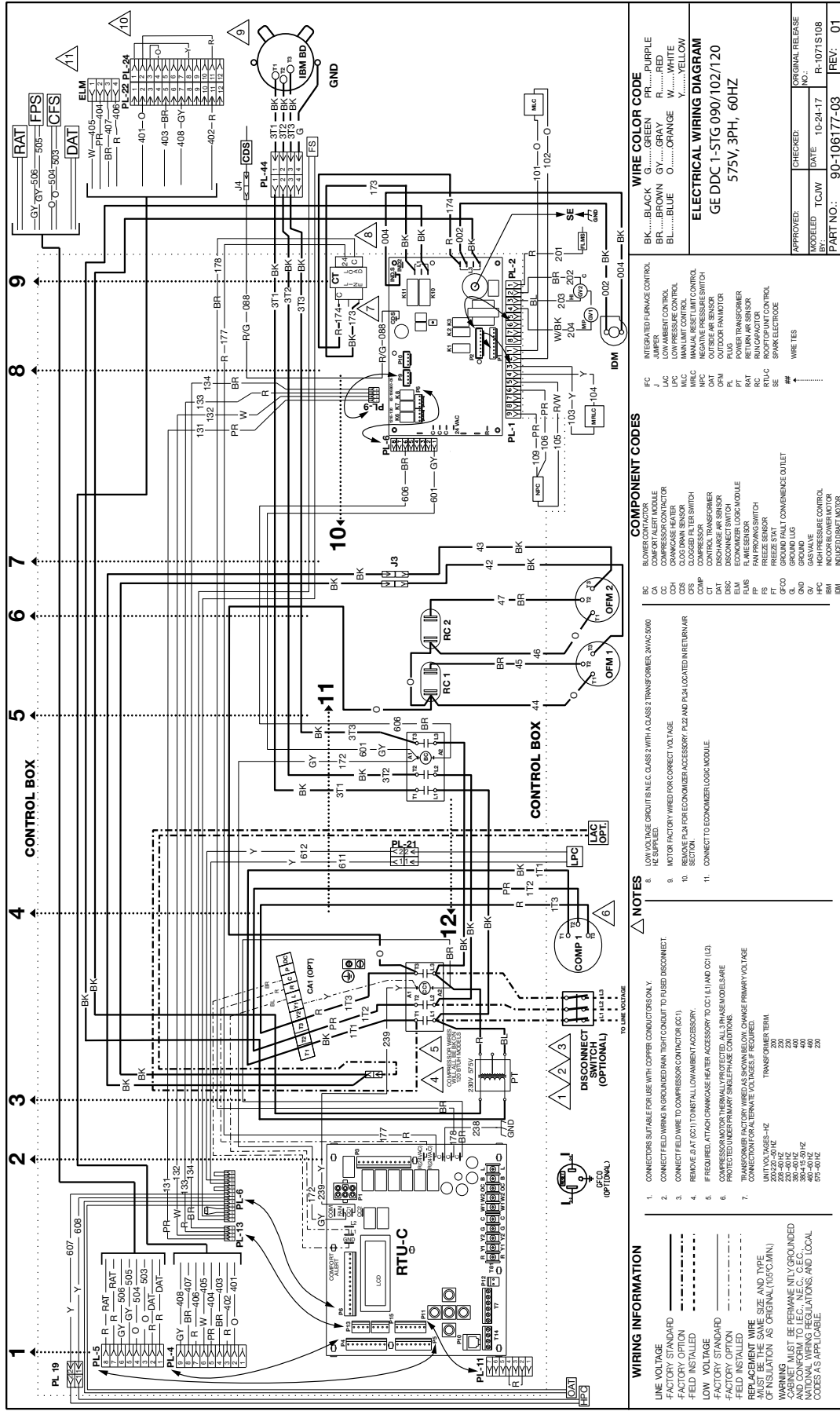
COMPONENT CODES

| | |
|------|---------------------------------|
| BC | BLOWER CONTACTOR |
| CA | COMFORT ALERT MODULE |
| CH | CHILLER CONTACTOR |
| CO | COOLING COIL |
| CS | COOLDRYAN SENSOR |
| CT | CLOCKED FILTER SWITCH |
| DAT | CONTROL TRANSFORMER |
| DISC | DISCONNECT SWITCH |
| ELM | ELM CONTACTOR |
| FMS | FAN PROTECT SWITCH |
| FLS | FLAME SENSOR |
| FP | FREESTAR |
| FT | FREESTAR |
| GECO | GROUND FAULT CONVENIENCE OUTLET |
| GL | GROUND LUG |
| GV | GAS VALVE |
| HIC | HIGH PRESSURE CONTROL |
| IM | INDOOR FLOWMETER MOTOR |
| IMM | INDOOR FAN MOTOR |

- NOTES**
- CONNECTORS SUITABLE FOR USE WITH COPPER CONDUCTORS ONLY
 - CONNECT FIELD WIRING IN GROUNDING (MAY NOT BE USED TO DISCONNECT)
 - CONNECT FIELD WIRE TO COMPRESSOR CONTACTOR (CCI)
 - REMOVE J1 (CCI) TO INSTALL LOW AMBIENT ACCESSORY
 - F REQUIRED AT TACH/CHAMBER HEATER ACCESSORY TO CCT K1 AND CCT K2
 - COMPRESSOR MOTOR THERMALLY PROTECTED ALL PHASE MODELS ARE PROTECTED UNDER PRIMARY SINGLE PHASE CONDITIONS
 - TRANSFORMER FACTORY WIRING SHALL SHOW BELOW CHANGE PRIMARY VOLTAGE
- TO LINE VOLTAGE
- | | |
|------------------|--------------------|
| 300-230V/380V-4C | TRANSFORMER TERNAL |
| 208-208/42 | 230 |
| 208-208/42 | 230 |
| 208-208/42 | 400 |
| 208-208/42 | 400 |
| 208-208/42 | 400 |
| 208-208/42 | 230 |

- WIRING INFORMATION**
- LINE VOLTAGE _____
- FACTORY STANDARD _____
- FACTORY OPTION _____
- FIELD INSTALLED _____
- LOW VOLTAGE _____
- FACTORY STANDARD _____
- FACTORY OPTION _____
- FIELD INSTALLED _____
- WIRING MUST BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE NATIONAL AND LOCAL REGULATIONS, AND LOCAL CODES AS APPLICABLE.

FIGURE 25



WIRING INFORMATION

- 1. CONNECTORS SUITABLE FOR USE WITH COPPER CONDUCTORS ONLY
- 2. CONNECT FIELD WIRING IN GROUNDING RIGID CONDUIT TO AVOID DISCONNECT
- 3. CONNECT FIELD WIRE TO COMPRESSOR CONTACTOR (CCT)
- 4. REMOVE J AT (CCT) TO INSTALL AMBIENT ACCESSORY
- 5. IF REQUIRED, ATTACH CRANKCASE HEATER ACCESSORY TO CCT (L1 AND C1 (L2))
- 6. COMPRESSOR MOTOR THERMALLY PROTECTED, ALL PHASE MODELS ARE PROTECTED UNDER PRIMARY SINGLE PHASE CONDITIONS
- 7. TRANSFORMER FACTORY WIRED AS SHOWN BELOW. CHANGE PRIMARY VOLTAGE CONNECTION OR ALTERNATE VOLTAGES, IF REQUIRED.

| | |
|-------------------|-----|
| TRANSFORMER RATIO | 230 |
| 200-00-02 | 230 |
| 330-00-02 | 400 |
| 400-00-02 | 400 |
| 480-00-02 | 480 |
| 575-00-02 | 230 |

NOTES

- 1. LOW VOLTAGE CIRCUITS IN E.C. CLASS 2 WITH A CLASS 2 TRANSFORMER, 2WAC, 2000 VA SUPPLIED.
- 2. MOTOR FACTORY WIRED FOR CORRECT VOLTAGE
- 3. REMOVE PL-4 FOR ECONOMIZER ACCESSORY (PL-2Z AND PL-4) LOCATED IN RETURN AIR SECTION.
- 4. CONNECT TO ECONOMIZER LOGIC MODULE.

COMPONENT CODES

| | |
|------|---------------------------------|
| BC | BLOWER CONTACTOR |
| CA | COMFORT ALERT MODULE |
| CO | CRANKCASE HEATER |
| CS | CLOGGED FILTER SWITCH |
| CT | CONTROL TRANSFORMER |
| DAT | DISCHARGE AIR SENSOR |
| DISC | DISCONNECT SWITCH |
| ELM | ELM LOGIC MODULE |
| FMS | FAN PROVISION SWITCH |
| FP | FRESH AIR SENSOR |
| FT | FRESH AIR SWITCH |
| GFEO | GROUND FAULT CONVENIENCE OUTLET |
| GL | GROUND LUG |
| GV | GAS VALVE |
| HPC | HIGH PRESSURE CONTROL |
| INDP | INDOOR FLOWMETER |
| BM | INDOOR BURNER MOTOR |

WIRE COLOR CODE

| | | | | | | | |
|----|-------|----|--------|----|--------|----|--------|
| BK | BLACK | GY | GRAY | GR | GREEN | PR | PURPLE |
| BR | BROWN | GY | GRAY | RD | RED | W | WHITE |
| BL | BLUE | O | ORANGE | OR | ORANGE | Y | YELLOW |

ELECTRICAL WIRING DIAGRAM

GE DDC 1-STG 090/102/120
575V, 3PH, 60HZ

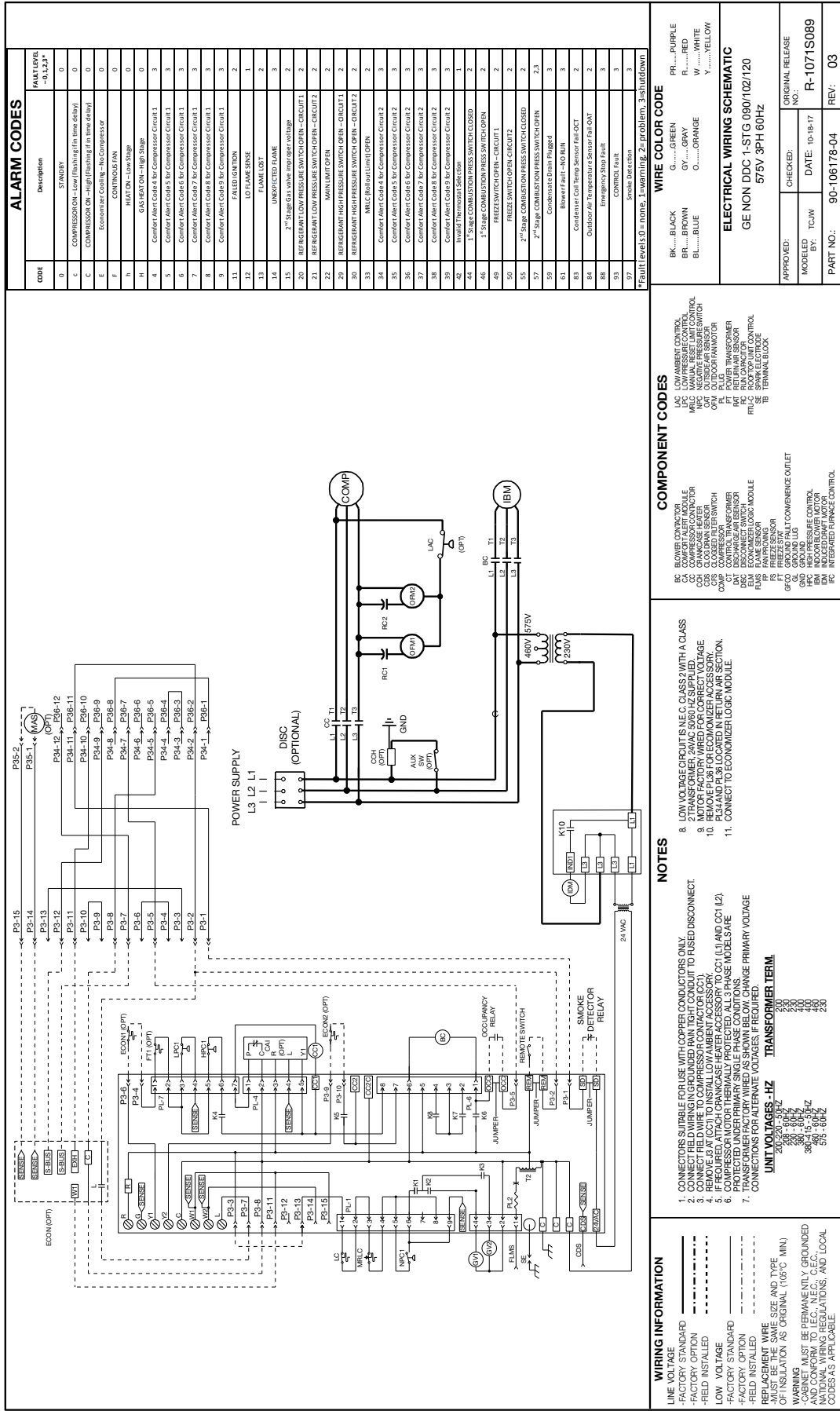
APPROVED

| | | |
|----------|------|-----|
| CHECKED | DATE | NO. |
| APPROVED | DATE | NO. |
| APPROVED | DATE | NO. |

PART NO.

90-106177-03 REV: 01

FIGURE 28



| CODE | Description | WIRE COLOR |
|------|---|-------------|
| 0 | STANDBY | PR...PURPLE |
| C | COMPRESSOR - Low (Flashing in time delay) | GY...GRAY |
| C | COMPRESSOR ON - High (Flashing in time delay) | BR...BROWN |
| E | Economizer Cooling - No Compressor | BL...BLUE |
| F | CONTINUOUS FAN | O...ORANGE |
| H | HEAT ON - Low Stage | W...WHITE |
| H | HEAT ON - High Stage | Y...YELLOW |
| 4 | Comfort Alert Code 4 B/C Compressor Circuit 1 | |
| 5 | Comfort Alert Code 5 B/C Compressor Circuit 1 | |
| 6 | Comfort Alert Code 6 B/C Compressor Circuit 1 | |
| 7 | Comfort Alert Code 7 B/C Compressor Circuit 1 | |
| 8 | Comfort Alert Code 8 B/C Compressor Circuit 1 | |
| 9 | Comfort Alert Code 9 B/C Compressor Circuit 1 | |
| 11 | FLAME IGNITION | |
| 12 | OFF FLAME SENSE | |
| 13 | FLAME LOCK | |
| 14 | UNEXPECTED FLAME | |
| 15 | 2" Stage Gas Valve Inoperative Voltage | |
| 20 | REFRIGERANT LOW PRESSURE SWITCH OPEN - CIRCUIT 2 | |
| 21 | REFRIGERANT LOW PRESSURE SWITCH OPEN - CIRCUIT 2 | |
| 22 | MAIN LIMIT OPEN | |
| 29 | REFRIGERANT HIGH PRESSURE SWITCH OPEN - CIRCUIT 1 | |
| 30 | REFRIGERANT HIGH PRESSURE SWITCH OPEN - CIRCUIT 2 | |
| 33 | MRCL Roll-out Limit OPEN | |
| 34 | Comfort Alert Code 4 B/C Compressor Circuit 2 | |
| 35 | Comfort Alert Code 5 B/C Compressor Circuit 2 | |
| 36 | Comfort Alert Code 6 B/C Compressor Circuit 2 | |
| 37 | Comfort Alert Code 7 B/C Compressor Circuit 2 | |
| 38 | Comfort Alert Code 8 B/C Compressor Circuit 2 | |
| 39 | Comfort Alert Code 9 B/C Compressor Circuit 2 | |
| 42 | Thermostat Selection | |
| 44 | 1" Stage Combustion Press Switch Closed | |
| 46 | 1" Stage Combustion Press Switch Open | |
| 49 | FREEZE SWITCH OPEN - CIRCUIT 1 | |
| 50 | FREEZE SWITCH OPEN - CIRCUIT 2 | |
| 55 | 2" Stage Combustion Press Switch Closed | |
| 57 | 2" Stage Combustion Press Switch Open | |
| 59 | Condensate Drain Inlet | |
| 61 | Blower Fault - NO RUN | |
| 83 | Condenser Coil Temp Sensor Fail Out | |
| 84 | Outdoor Air Temperature Sensor Fail Out | |
| 88 | Emergency Stop Fault | |
| 93 | CONTROL Fault | |
| 97 | Smoke Detection | |

| WIRE COLOR | DESCRIPTION |
|------------|-------------|
| BK...BLACK | GROUND |
| BR...BROWN | POWER |
| BL...BLUE | LINE |
| GY...GRAY | COMMON |
| O...ORANGE | CONTROL |
| W...WHITE | WATER |
| Y...YELLOW | YIELD |

ELECTRICAL WIRING SCHEMATIC
GE NON DDC 1-STS 090/102/120
575V 3PH 60HZ

| APPROVED: | CHECKED: | ORIGINAL RELEASE NO.: |
|-----------------|----------------|-----------------------|
| | | |
| MODELED BY: TCW | DATE: 10-18-17 | R-1071S089 |
| PART NO.: | 90-106178-04 | REV: 03 |

| COMPONENT CODES | DESCRIPTION |
|-----------------|-------------------------------|
| BA | BLOWER FAN MOTOR |
| CA | CONDENSATE DRAIN CONTROL |
| CC | COMPRESSOR CONTACTOR |
| CCS | CONDENSATE COIL SENSOR |
| CO | CONTROL BOARD |
| COA | CONDENSATE OVERFLOW ACCESSORY |
| COB | CONDENSATE OVERFLOW ACCESSORY |
| COG | CONDENSATE OVERFLOW ACCESSORY |
| COH | CONDENSATE OVERFLOW ACCESSORY |
| COI | CONDENSATE OVERFLOW ACCESSORY |
| COJ | CONDENSATE OVERFLOW ACCESSORY |
| COK | CONDENSATE OVERFLOW ACCESSORY |
| COA | CONDENSATE OVERFLOW ACCESSORY |
| COB | CONDENSATE OVERFLOW ACCESSORY |
| COG | CONDENSATE OVERFLOW ACCESSORY |
| COH | CONDENSATE OVERFLOW ACCESSORY |
| COI | CONDENSATE OVERFLOW ACCESSORY |
| COJ | CONDENSATE OVERFLOW ACCESSORY |
| COK | CONDENSATE OVERFLOW ACCESSORY |

| NOTES |
|--|
| 1. CONNECTORS SUITABLE FOR USE WITH COPPER CONDUCTORS ONLY. |
| 2. CONNECT FIELD WIRING IN GROUNDED RAIN TIGHT CONDUIT TO FUSED DISCONNECT. |
| 3. REMOVE JUMPER AT (C) TO INSTALL LOW AMBIENT ACCESSORY. |
| 4. IF REQUIRED, ATTACH CRANKCASE HEATER ACCESSORY TO (L) AND (C) (L2). |
| 5. COMPRESSOR MOTOR THEMALLY PROTECTED. ALL 3 PHASE MODELS ARE. |
| 6. TRANSFORMER FACTORY WIRED AS SHOWN BELOW. CHANGE PRIMARY VOLTAGE CONNECTIONS FOR ALTERNATE VOLTAGES, IF REQUIRED. |
| 7. TRANSFORMER TERM. |
| UNIT VOLTAGES - HZ |
| 200-230 60 HZ |
| 230-240 60 HZ |
| 230-240 50 HZ |
| 380-415 50 HZ |
| 380-415 60 HZ |
| 480-480 60 HZ |
| 480-480 50 HZ |

| NOTES |
|--|
| 8. LOW VOLTAGE CIRCUIT IS N.E.C. CLASS 2 WITH A CLASS 2 TRANSFORMER, 2MVA 50/60 HZ SUPPLIED. |
| 9. REMOVE JUMPER AT (C) TO INSTALL LOW AMBIENT ACCESSORY. |
| 10. R3, R4 AND R5 LOCATED IN RETURN AIR SECTION. |
| 11. CONNECT TO ECONOMIZER LOGIC MODULE. |

| WIRING INFORMATION |
|--|
| LINE VOLTAGE |
| -FACTORY STANDARD |
| -FACTORY OPTION |
| -FIELD INSTALLED |
| LOW VOLTAGE |
| -FACTORY STANDARD |
| -FACTORY OPTION |
| -FIELD INSTALLED |
| REPLACEMENT WIRE SIZE AND TYPE |
| OF INSULATION AS ORIGINAL (105°C MIN) |
| WARNING |
| -CABINET MUST BE PERMANENTLY GROUNDED |
| -WIRING MUST BE IN ACCORDANCE WITH ALL |
| NATIONAL WIRING REGULATIONS, AND LOCAL |
| CODES AS APPLICABLE. |

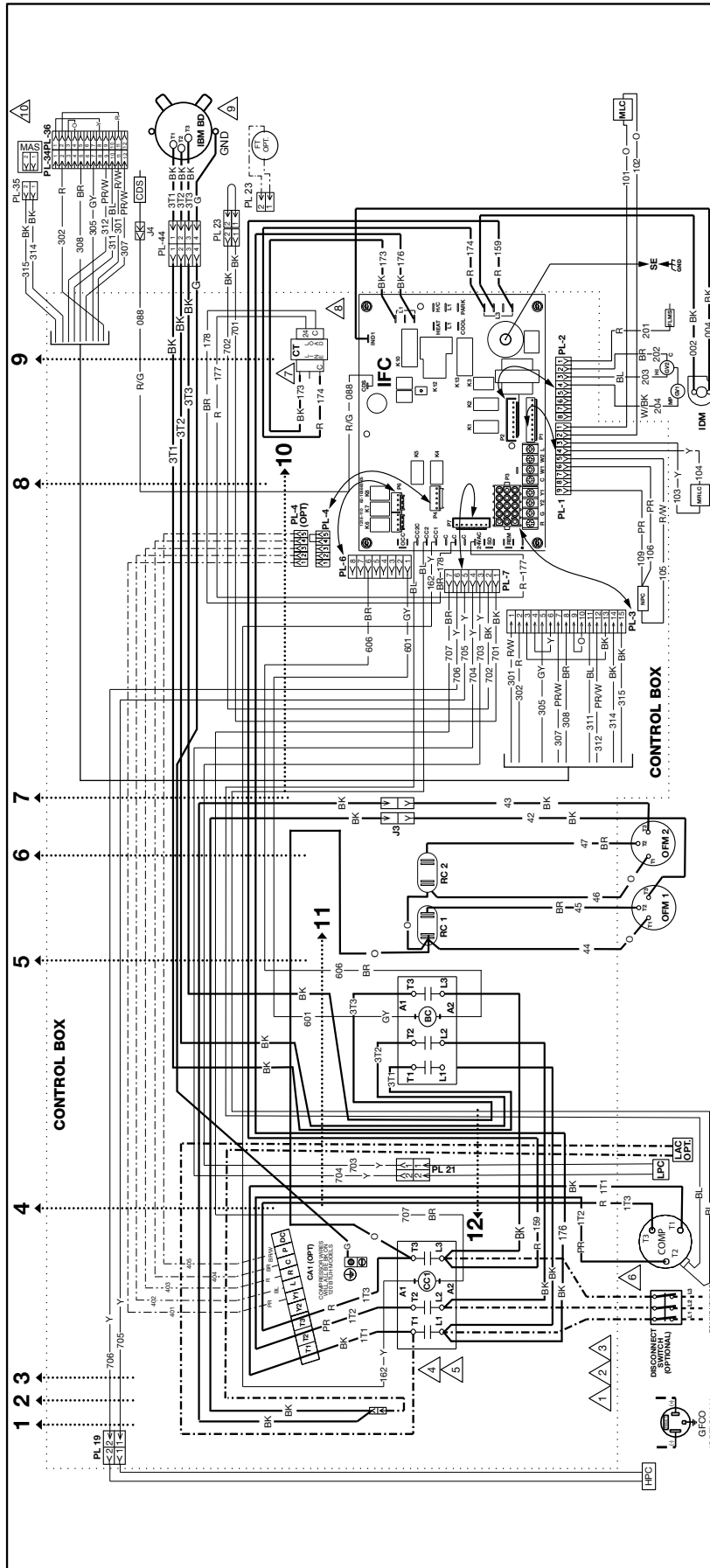
| COMPONENT CODES | DESCRIPTION |
|-----------------|-------------------------------|
| BA | BLOWER FAN MOTOR |
| CA | CONDENSATE DRAIN CONTROL |
| CC | COMPRESSOR CONTACTOR |
| CCS | CONDENSATE COIL SENSOR |
| CO | CONTROL BOARD |
| COA | CONDENSATE OVERFLOW ACCESSORY |
| COB | CONDENSATE OVERFLOW ACCESSORY |
| COG | CONDENSATE OVERFLOW ACCESSORY |
| COH | CONDENSATE OVERFLOW ACCESSORY |
| COI | CONDENSATE OVERFLOW ACCESSORY |
| COJ | CONDENSATE OVERFLOW ACCESSORY |
| COK | CONDENSATE OVERFLOW ACCESSORY |
| COA | CONDENSATE OVERFLOW ACCESSORY |
| COB | CONDENSATE OVERFLOW ACCESSORY |
| COG | CONDENSATE OVERFLOW ACCESSORY |
| COH | CONDENSATE OVERFLOW ACCESSORY |
| COI | CONDENSATE OVERFLOW ACCESSORY |
| COJ | CONDENSATE OVERFLOW ACCESSORY |
| COK | CONDENSATE OVERFLOW ACCESSORY |

| COMPONENT CODES | DESCRIPTION |
|-----------------|-------------------------------|
| BA | BLOWER FAN MOTOR |
| CA | CONDENSATE DRAIN CONTROL |
| CC | COMPRESSOR CONTACTOR |
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| COA | CONDENSATE OVERFLOW ACCESSORY |
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| COH | CONDENSATE OVERFLOW ACCESSORY |
| COI | CONDENSATE OVERFLOW ACCESSORY |
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| COG | CONDENSATE OVERFLOW ACCESSORY |
| COH | CONDENSATE OVERFLOW ACCESSORY |
| COI | CONDENSATE OVERFLOW ACCESSORY |
| COJ | CONDENSATE OVERFLOW ACCESSORY |
| COK | CONDENSATE OVERFLOW ACCESSORY |

| COMPONENT CODES | DESCRIPTION |
|-----------------|-------------------------------|
| BA | BLOWER FAN MOTOR |
| CA | CONDENSATE DRAIN CONTROL |
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| COG | CONDENSATE OVERFLOW ACCESSORY |
| COH | CONDENSATE OVERFLOW ACCESSORY |
| COI | CONDENSATE OVERFLOW ACCESSORY |
| COJ | CONDENSATE OVERFLOW ACCESSORY |
| COK | CONDENSATE OVERFLOW ACCESSORY |

| COMPONENT CODES | DESCRIPTION |
|-----------------|-------------------------------|
| BA | BLOWER FAN MOTOR |
| CA | CONDENSATE DRAIN CONTROL |
| CC | COMPRESSOR CONTACTOR |
| CCS | CONDENSATE COIL SENSOR |
| CO | CONTROL BOARD |
| COA | CONDENSATE OVERFLOW ACCESSORY |
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| COG | CONDENSATE OVERFLOW ACCESSORY |
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| COG | CONDENSATE OVERFLOW ACCESSORY |
| COH | CONDENSATE OVERFLOW ACCESSORY |
| COI | CONDENSATE OVERFLOW ACCESSORY |
| COJ | CONDENSATE OVERFLOW ACCESSORY |
| COK | CONDENSATE OVERFLOW ACCESSORY |

FIGURE 29



WIRING INFORMATION

- LINE VOLTAGE
- FACTORY STANDARD
- FACTORY OPTION
- FIELD INSTALLED
- LOW VOLTAGE
- FACTORY STANDARD
- FIELD INSTALLED
- REPLACEMENT WIRE SIZE AND TYPE
- CABINET MUST BE PERMANENTLY GROUNDED
- WARRANTY
- NATIONAL WIRING REGULATIONS AND LOCAL CODES AS APPLICABLE.

WIRING INFORMATION (OPTIONAL)

- DISCONNECT (OPTIONAL)
- GFCO
- OPTIONAL

NOTES

- CONNECTORS SUITABLE FOR USE WITH COPPER CONDUCTORS ONLY.
- CONNECT FIELD WIRING IN GROUNDED MAIN TIGHT CONDUIT TO FUSED DISCONNECT.
- CONNECT FIELD WIRE TO COMPRESSOR CONTACT (CC).
- FIELD WIRE TO COMPRESSOR CONTACT (CC).
- IF REQUIRED, ATTACH CRANKCASE HEATER ACCESSORY TO CC1 (L1) AND CC2 (L2).
- COMPRESSOR MOTOR THERMALLY PROTECTED. ALL 3 PHASE MODELS ARE PROTECTED UNDER PRIMARY SINGLE PHASE CONDITIONS.
- CONNECTIONS FOR ALTERNATE WIRING SIZES, IF REQUIRED.

UNIT VOLTAGES - HZ

| | |
|---------------|-------------------|
| 200-220-50/60 | TRANSFORMER TERM. |
| 208-60/50 | 200 |
| 230-60/50 | 230 |
| 380-60/50 | 380 |
| 380-60/50 | 400 |
| 380-415-50/60 | 400 |
| 480-60/50 | 460 |
| 575-60/50 | 230 |

COMPONENT CODES

- BA BLOWER CONDUCTOR
- CA BLOWER ALERT MODULE
- CC1 CRANKCASE HEATER
- CC2 CRANKCASE HEATER
- CC3 CLOSURE DRUM SENSOR
- CC4 CLOSURE DRUM SENSOR
- COMP COMPRESSOR
- CRK CRANKCASE HEATER
- DAI DISCHARGE AIR SENSOR
- DISC DISCONNECT SWITCH
- FP FAN PREWIND SWITCH
- GND GROUND
- GRD GROUND
- GRD GROUND
- GV GUST VALVE
- IBM INDOOR BLOWER MOTOR
- IC INTEGRATED PURCHASE CONTROL
- J JUMPER
- LAC LOW AMBIENT CONTROL
- L2 LOW AMBIENT CONTROL
- L3 LOW AMBIENT CONTROL
- L4 LOW AMBIENT CONTROL
- L5 LOW AMBIENT CONTROL
- L6 LOW AMBIENT CONTROL
- L7 LOW AMBIENT CONTROL
- L8 LOW AMBIENT CONTROL
- L9 LOW AMBIENT CONTROL
- L10 LOW AMBIENT CONTROL
- L11 LOW AMBIENT CONTROL
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- L92 LOW AMBIENT CONTROL
- L93 LOW AMBIENT CONTROL
- L94 LOW AMBIENT CONTROL
- L95 LOW AMBIENT CONTROL
- L96 LOW AMBIENT CONTROL
- L97 LOW AMBIENT CONTROL
- L98 LOW AMBIENT CONTROL
- L99 LOW AMBIENT CONTROL
- L100 LOW AMBIENT CONTROL

WIRE COLOR CODE

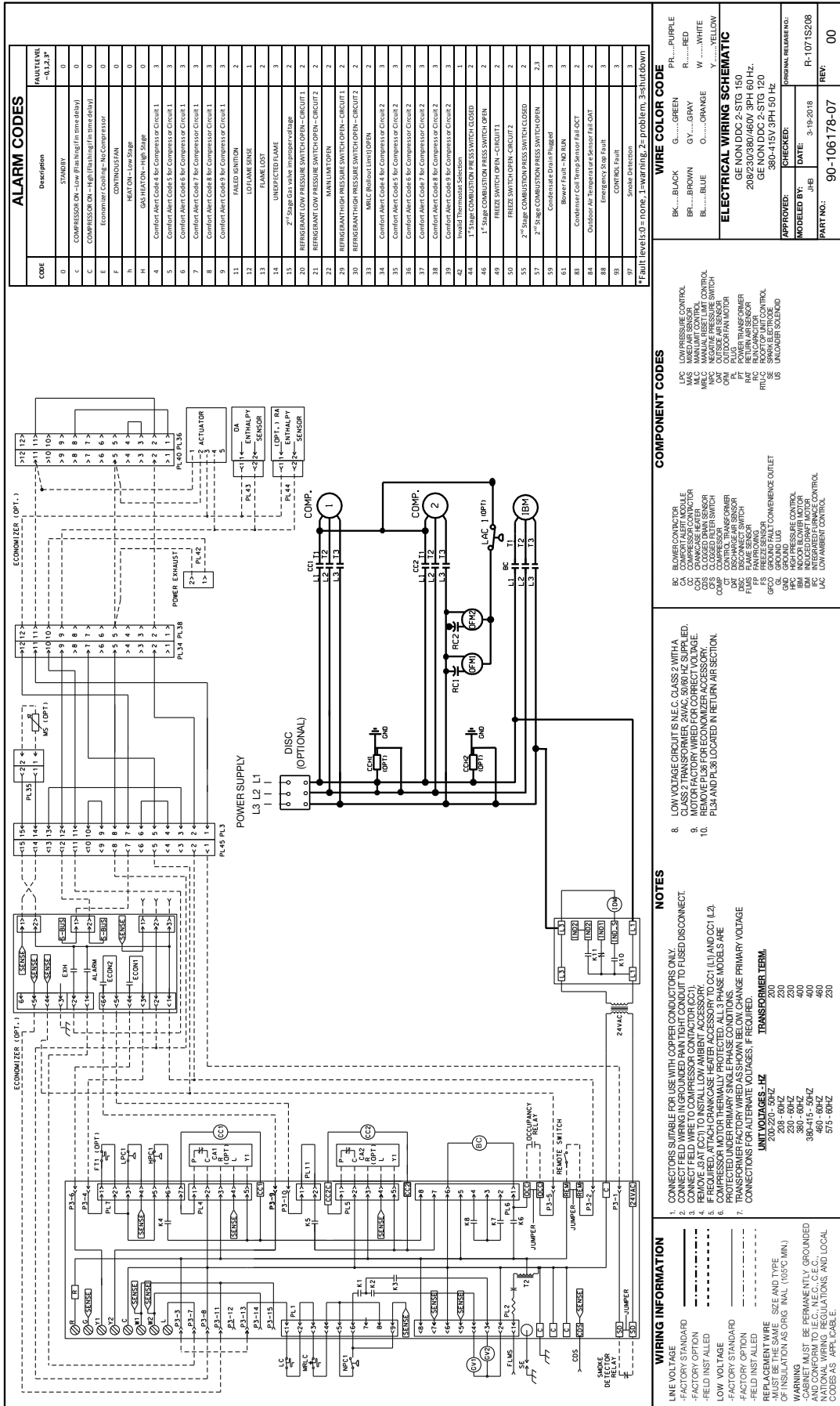
- BK...BLACK
- BR...BROWN
- BL...BLUE
- GY...GRAY
- OR...ORANGE
- GR...GREEN
- RD...RED
- WH...WHITE
- YL...YELLOW
- PL...PURPLE

ELECTRICAL WIRING DIAGRAM

GE NON DDC 2-STG 090/102/120
208/230/460V 3 PH 60 HZ

APPROVED: _____
MODELED BY: TCJ/W
DATE: 10-26-17
CHECKED: _____
DATE: _____
ORIGINAL RELEASE NO.: R-1071S108
PART NO.: 90-106177-05
REV.: 02

FIGURE 34



| ALARM LEVEL | FAULT LEVEL | CODE | Description |
|-------------|-------------|------|---|
| 0 | 0 | 0 | STANDBY |
| 0 | 0 | C | COMPRESSOR ON - Low (Purging in time delay) |
| 0 | 0 | C | COMPRESSOR ON - High (Purging in time delay) |
| 0 | 0 | E | Economizer Cooling - No Compressor |
| 0 | 0 | F | CONTINUOUS FAN |
| 0 | 0 | H | HEAT ON - Low Stage |
| 0 | 0 | H | GAS HEAT ON - High Stage |
| 3 | 3 | 4 | Compressor Alarm Code 4 for Compressor of Circuit 1 |
| 3 | 3 | 5 | Compressor Alarm Code 5 for Compressor of Circuit 1 |
| 3 | 3 | 6 | Compressor Alarm Code 6 for Compressor of Circuit 1 |
| 3 | 3 | 7 | Compressor Alarm Code 7 for Compressor of Circuit 1 |
| 3 | 3 | 8 | Compressor Alarm Code 8 for Compressor of Circuit 1 |
| 3 | 3 | 9 | Compressor Alarm Code 9 for Compressor of Circuit 1 |
| 2 | 2 | 11 | PAID POSITION |
| 2 | 2 | 12 | OFF FLAME SENSE |
| 2 | 2 | 13 | FLAME LOST |
| 2 | 2 | 14 | UNEXPECTED FLAME |
| 2 | 2 | 15 | 2 nd Stage Gas Valve Impedance Voltage |
| 2 | 2 | 20 | REFRIGERANT LOW PRESSURE SWITCH OPEN - CIRCUIT 1 |
| 2 | 2 | 21 | REFRIGERANT LOW PRESSURE SWITCH OPEN - CIRCUIT 2 |
| 2 | 2 | 22 | MANUAL MOTOR |
| 2 | 2 | 29 | REFRIGERANT HIGH PRESSURE SWITCH OPEN - CIRCUIT 1 |
| 2 | 2 | 30 | REFRIGERANT HIGH PRESSURE SWITCH OPEN - CIRCUIT 2 |
| 2 | 2 | 33 | MRLC Inhibit Limit OPEN |
| 2 | 2 | 34 | MRLC Inhibit Limit CLOSED |
| 3 | 3 | 36 | Compressor Alarm Code 6 for Compressor of Circuit 2 |
| 3 | 3 | 37 | Compressor Alarm Code 7 for Compressor of Circuit 2 |
| 3 | 3 | 38 | Compressor Alarm Code 8 for Compressor of Circuit 2 |
| 3 | 3 | 39 | Compressor Alarm Code 9 for Compressor of Circuit 2 |
| 1 | 1 | 40 | Pressure Transducer Sense |
| 1 | 1 | 41 | 2 nd Stage Compressor Pressure Switch CLOSED |
| 2 | 2 | 46 | 1 st Stage Compressor Pressure Switch OPEN |
| 2 | 2 | 49 | Pressure Switch OPEN - Circuit 1 |
| 2 | 2 | 50 | Pressure Switch OPEN - Circuit 2 |
| 2 | 2 | 55 | 2 nd Stage Compressor Pressure Switch CLOSED |
| 2 | 2 | 57 | 2 nd Stage Compressor Pressure Switch OPEN |
| 3 | 3 | 59 | Condensate Drain Plugged |
| 3 | 3 | 61 | Blower Fault - No Run |
| 2 | 2 | 83 | Condenser Coil Temperature Sensor Fail - OAT |
| 2 | 2 | 84 | Outdoor Air Temperature Sensor Fail - OAT |
| 3 | 3 | 88 | Emergency Stop Fault |
| 3 | 3 | 93 | Control Fault |
| 3 | 3 | 97 | Smoke Detection |

*Fault Levels: 0 = None, 1 = Warning, 2 = Problem, 3 = Shutdown

| WIRE COLOR CODE | WIRE COLOR CODE |
|-----------------|-----------------|
| BK.....BLACK | GR.....GREEN |
| BR.....BROWN | GY.....GRAY |
| BL.....BLUE | OR.....ORANGE |
| W.....WHITE | Y.....YELLOW |

ELECTRICAL WIRING SCHEMATIC

GE NON DDC 2-STG 150
208/230/380/460V 3PH 60 HZ
GE NON DDC 2-STG 120
380-475V 3PH 50 HZ

APPROVED: _____ DATE: 3-19-2016 ORIGINAL RELEASE NO: R-1071SS208
 MODELLED BY: JHB
 PART NO.: 90-106178-07 REV: 00

COMPONENT CODES

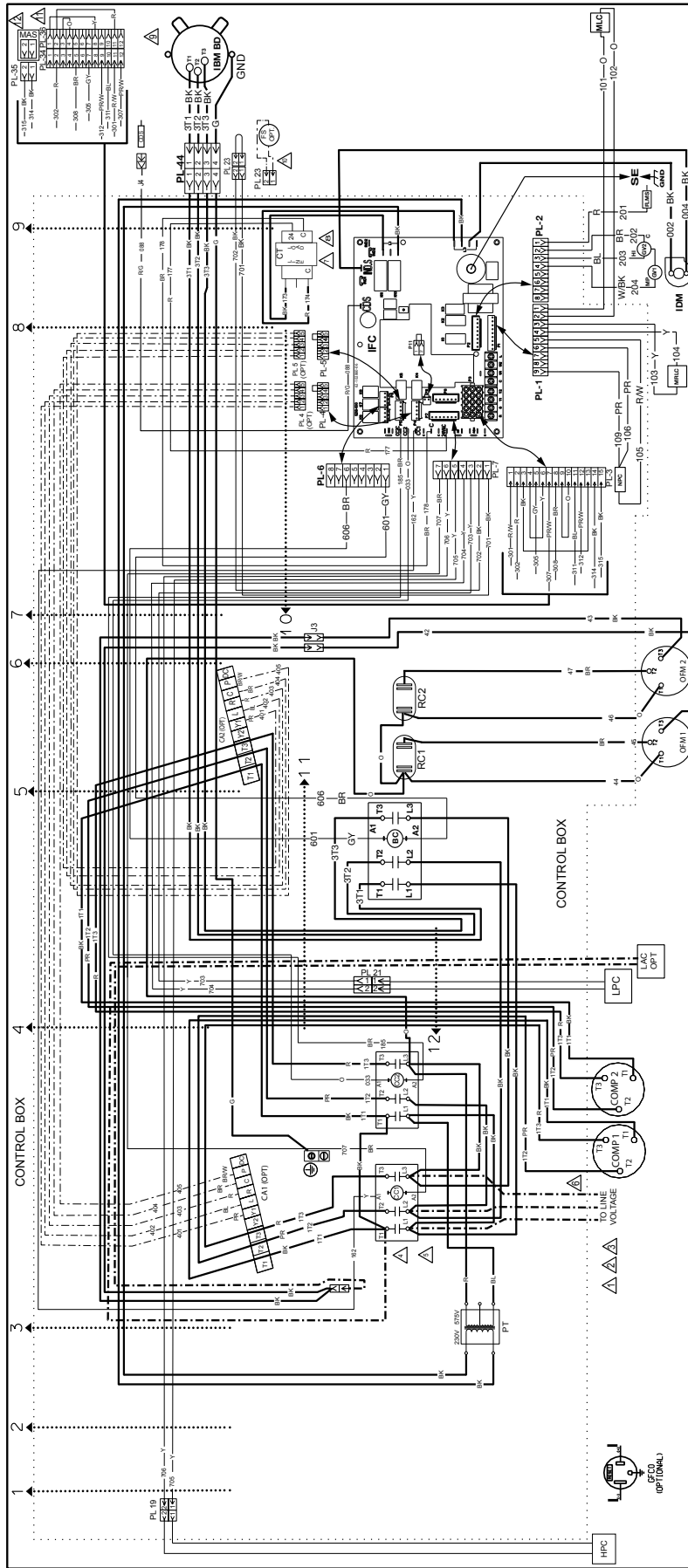
BC: BLOWER CONTROL
 MAS: MAXIMUM AIR SPEED SENSOR
 MRLC: MANUAL RESET LIMIT CONTROL
 MRC: MANUAL RESET LIMIT SWITCH
 OAT: OUTDOOR AIR TEMPERATURE SENSOR
 OAT: OUTSIDE AIR SENSE
 ORN: OUTDOOR RUN MOTOR
 OT: OUTDOOR TEMPERATURE SENSOR
 PT: POWER TRANSFORMER
 PTC: PROTECTIVE THERMISTOR CONTROL
 RLC: REFRIGERANT LEVEL CONTROL
 RUC: REFRIGERANT UNIT CONTROL
 US: UNLOAD SOLENOID

LC: LOW PRESSURE CONTROL
 MAS: MAXIMUM AIR SPEED SENSOR
 MRLC: MANUAL RESET LIMIT CONTROL
 MRC: MANUAL RESET LIMIT SWITCH
 OAT: OUTDOOR AIR TEMPERATURE SENSOR
 OAT: OUTSIDE AIR SENSE
 ORN: OUTDOOR RUN MOTOR
 OT: OUTDOOR TEMPERATURE SENSOR
 PT: POWER TRANSFORMER
 PTC: PROTECTIVE THERMISTOR CONTROL
 RLC: REFRIGERANT LEVEL CONTROL
 RUC: REFRIGERANT UNIT CONTROL
 US: UNLOAD SOLENOID

- NOTES**
- CONNECTORS SUITABLE FOR USE WITH COPPER CONDUCTORS ONLY.
 - CONNECT FELD WIRING IN GROUNDED MAIN TIGHT CONDUIT TO FUSED DISCONNECT.
 - REMOVE J3 AT C21 TO INSTALL LOW AMBIENT ACCESSORY.
 - REMOVE J3 AT C21 TO INSTALL LOW AMBIENT ACCESSORY.
 - COMPRESSOR MOTOR TERMINALS PROTECTED BY ALL 3 PHASE MODELS ARE PROTECTED UNDER PRIMARY SINGLE PHASE CONDITIONS.
 - TRANSFORMER FACTORY WIRING AS SHOWN BELOW. CHANGE PRIMARY VOLTAGE CONNECTIONS FOR ALTERNATE VOLTAGES, IF REQUIRED.
- UNIT VOLTAGES - HZ**
- | | |
|----------|-----|
| 208-60HZ | 230 |
| 230-60HZ | 230 |
| 380-60HZ | 400 |
| 460-60HZ | 460 |
| 575-60HZ | 230 |
- TRANSFORMER TURNS**
- | | |
|----------|-----|
| 208-60HZ | 230 |
| 230-60HZ | 230 |
| 380-60HZ | 400 |
| 460-60HZ | 460 |
| 575-60HZ | 230 |

- WIRING INFORMATION**
- SOLID LINE: FACTORY STANDARD
 - DASHED LINE: FACTORY OPTION
 - DOTTED LINE: FELD INSTALLED
 - LONG DASHED LINE: LOW VOLTAGE
 - SOLID LINE WITH DASH: FACTORY STANDARD
 - DOTTED LINE WITH DASH: FELD INSTALLED
 - WAVE DASHED LINE: REPLACEMENT WIRE
 - WAVE DOTTED LINE: MUST BE THE SAME SIZE AND TYPE
 - WAVE DASHED LINE WITH DOTTED: WIRE NOT AS SHOWN (N/A) (100% MIN)
 - WAVE DOTTED LINE: WARNING
 - WAVE DOTTED LINE WITH DASH: CABINET MUST BE PERMANENTLY GROUNDED AND CONFORM TO I.E.C., N.E.C., C.E.C. AND LOCAL REGULATIONS, AND LOCAL CODES AS APPL. CABLE.

FIGURE 35



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 (105C, MIN)
- WARNING
- MUST BE PERMANENTLY GROUNDED AND CONFORM TO I.E.C., N.E.C., C.E.C., NATIONAL WIRING REGULATIONS, AND LOCAL CODES AS APPLICABLE

WIRING INFORMATION

- 1. CONNECTORS SUITABLE FOR USE WITH COPPER CONDUCTORS ONLY.
- 2. CONNECT FIELD WIRING IN GROUND/BATT TIGHT CONDUIT TO FUSED DISCONNECT.
- 3. CONNECT FIELD WIRE TO COMPRESSOR CONTACTOR (CC).
- 4. REMOVE Jumper AT (CC) TO INSTALL LOW AMBIENT CONTROL.
- 5. IF REQUIRED, ATTACH CRANKCASE HEATER ACCESSORY TO CCI (L1) AND CCI (L2).
- 6. COMPRESSOR MOTOR THERMALLY PROTECTED ALL 3-PHASE MODELS ARE PROTECTED UNDER PRIMARY SINGLE PHASE CONDITIONS.
- 7. TRANSFORMER FACTORY WIRING AS SHOWN BELOW CHANGE PRIMARY VOLTAGE TO DESIRED VOLTAGE

| TRANSFORMER TAP | TRANSFORMER RATIO |
|-----------------|-------------------|
| 200 | 200-00 Hz |
| 220 | 220-00 Hz |
| 230 | 230-00 Hz |
| 240 | 240-00 Hz |
| 250 | 250-00 Hz |
| 260 | 260-00 Hz |
| 270 | 270-00 Hz |
| 280 | 280-00 Hz |
| 290 | 290-00 Hz |
| 300 | 300-00 Hz |
| 310 | 310-00 Hz |
| 320 | 320-00 Hz |
| 330 | 330-00 Hz |
| 340 | 340-00 Hz |
| 350 | 350-00 Hz |
| 360 | 360-00 Hz |
| 370 | 370-00 Hz |
| 380 | 380-00 Hz |
| 390 | 390-00 Hz |
| 400 | 400-00 Hz |
| 410 | 410-00 Hz |
| 420 | 420-00 Hz |
| 430 | 430-00 Hz |
| 440 | 440-00 Hz |
| 450 | 450-00 Hz |
| 460 | 460-00 Hz |
| 470 | 470-00 Hz |
| 480 | 480-00 Hz |
| 490 | 490-00 Hz |
| 500 | 500-00 Hz |
| 510 | 510-00 Hz |
| 520 | 520-00 Hz |
| 530 | 530-00 Hz |
| 540 | 540-00 Hz |
| 550 | 550-00 Hz |

NOTES

- LOW VOLTAGE CIRCUIT IS N.E.C. CLASS 2 WITH A CLASS 2 TRANSFORMER 24VAC 50/60 HZ SUPPLIED.
- MOTOR FACTORY WIRE FOR CORRECT VOLTAGE.
- REMOVE Jumper FOR OPTIONAL FT LOCATED IN BLOWER COMPARTMENT.
- REMOVE Jumper FOR ECONOMIZER ACCESSORY PLUMB AND PLUG LOCATED IN RETURN AIR SECTION.
- MAS ACCESSORY PROVIDED WIRE ECONOMIZER PLUS LOCATED IN BLOWER COMPARTMENT.

COMPONENT CODES

- BC BLOWER CONTACTOR
- CC COMPRESSOR CONTACTOR
- CCH CRANKCASE HEATER
- CDB CLOGGED DRAIN SENSOR
- CDP COMPRESSOR
- CDT CONTROL TRANSFORMER
- CDF DISCHARGE AIR SENSOR
- CDF FLAME SENSOR
- FP FAN PROOFING
- FS FAN SENSING
- GL GROUNDING
- GR GROUNDING
- IBMD INDUCED DRAFT MOTOR
- IBMD INDUCED DRAFT MOTOR BELT DRIVE
- IBMD INDUCED DRAFT MOTOR
- IBMD INDUCED DRAFT MOTOR
- J JUMPER
- LAC LOW AMBIENT CONTROL
- LPC LOW PRESSURE CONTROL
- NPC NEGATIVE PRESSURE CONTROL
- OAT OUTSIDE AIR MOTOR
- CRM CONTROL TRANSFORMER
- FT FAN PROOFING
- RAT RETURN AIR SENSOR
- RUC ROOFTOP UNIT CONTROL
- SE SPARK ELECTRODE
- WIRE NUT
- WIRE TIES

WIRE COLOR CODE

- BK...BLACK
- BR...BROWN
- BL...BLUE
- GY...GRAY
- OR...ORANGE
- PR...PURPLE
- RD...RED
- WH...WHITE
- Y...YELLOW

ELECTRICAL WIRING DIAGRAM

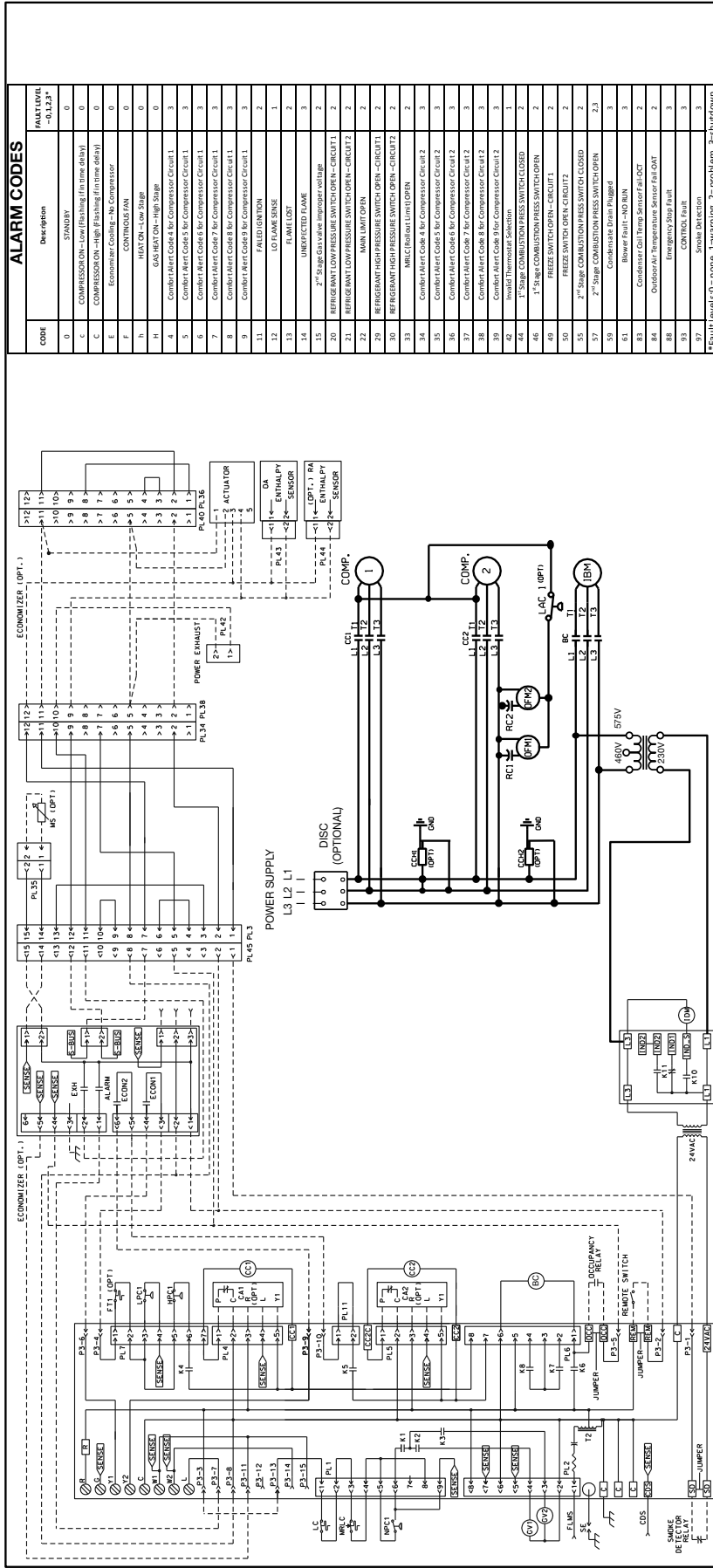
GE NON DDC 2-STG 150
575V 3 PH 60 HZ

APPROVED: _____
DATE: 03-01-18
TC: _____
BY: _____

CHECKED: _____
DATE: 03-01-18
TC: _____
BY: _____

ORIGINAL RELEASE NO: R-10719208
PART NO.: 90-106177-08
REV: 00

FIGURE 36



| CODE | Description | Alarm Level |
|------|--|-------------|
| 0 | Stability | 0 |
| 1 | Compressor - Low Flushing (in time delay) | 0 |
| 2 | Compressor - High Flushing (in time delay) | 0 |
| 3 | Economizer Cooling - No Compressor | 0 |
| 4 | Continuous Fan | 0 |
| 5 | Heat On - Low Stage | 0 |
| 6 | Heat On - High Stage | 0 |
| 7 | Combin Alert Code 4 for Compressor Circuit 1 | 3 |
| 8 | Combin Alert Code 5 for Compressor Circuit 1 | 3 |
| 9 | Combin Alert Code 6 for Compressor Circuit 1 | 3 |
| 10 | Combin Alert Code 7 for Compressor Circuit 1 | 3 |
| 11 | Combin Alert Code 8 for Compressor Circuit 1 | 3 |
| 12 | Combin Alert Code 9 for Compressor Circuit 1 | 3 |
| 13 | Failed On/Off | 2 |
| 14 | Low Flame Sense | 2 |
| 15 | Flame Lost | 2 |
| 16 | Unprotected Flame | 3 |
| 17 | 2 nd Stage Gas Valve Inoperable Voltage | 2 |
| 18 | Refrigerant Low Pressure Switch Open - Circuit 1 | 2 |
| 19 | Refrigerant Low Pressure Switch Open - Circuit 2 | 2 |
| 20 | Max Limit Open | 2 |
| 21 | Refrigerant High Pressure Switch Open - Circuit 1 | 2 |
| 22 | Refrigerant High Pressure Switch Open - Circuit 2 | 2 |
| 23 | MILC (No Load Limit) Open | 2 |
| 24 | Combin Alert Code 4 for Compressor Circuit 2 | 3 |
| 25 | Combin Alert Code 5 for Compressor Circuit 2 | 3 |
| 26 | Combin Alert Code 6 for Compressor Circuit 2 | 3 |
| 27 | Combin Alert Code 7 for Compressor Circuit 2 | 3 |
| 28 | Combin Alert Code 8 for Compressor Circuit 2 | 3 |
| 29 | Combin Alert Code 9 for Compressor Circuit 2 | 3 |
| 30 | Invalid Thermostat Selection | 1 |
| 31 | 1 st Stage Combustion Press Switch Closed | 2 |
| 32 | 1 st Stage Combustion Press Switch Open | 2 |
| 33 | Freeze Switch Open - Circuit 1 | 2 |
| 34 | Freeze Switch Open - Circuit 2 | 2 |
| 35 | 2 nd Stage Combustion Press Switch Closed | 2 |
| 36 | 2 nd Stage Combustion Press Switch Open | 2 |
| 37 | Combin Alert Code 4 for Compressor Circuit 1 | 3 |
| 38 | Combin Alert Code 5 for Compressor Circuit 1 | 3 |
| 39 | Combin Alert Code 6 for Compressor Circuit 1 | 3 |
| 40 | Combin Alert Code 7 for Compressor Circuit 1 | 3 |
| 41 | Combin Alert Code 8 for Compressor Circuit 1 | 3 |
| 42 | Combin Alert Code 9 for Compressor Circuit 1 | 3 |
| 43 | Low Voltage | 3 |
| 44 | Control Transformer | 3 |
| 45 | Disconnect Switch | 3 |
| 46 | Flame Sensor | 3 |
| 47 | Flame Proving | 3 |
| 48 | Freeze Sens | 3 |
| 49 | Ground Lug | 3 |
| 50 | High Pressure Control | 3 |
| 51 | Indoor/Outdoor Motor | 3 |
| 52 | Integrated Furnace Control | 3 |

| WIRE COLOR CODE | DESCRIPTION |
|-----------------|---------------|
| BK.....BLACK | PR.....PURPLE |
| GR.....GREEN | R.....RED |
| BR.....BROWN | W.....WHITE |
| BL.....BLUE | Y.....YELLOW |
| OR.....ORANGE | |

| COMPONENT CODES | DESCRIPTION |
|-----------------|------------------------------|
| BA | Blower Control Module |
| CB | Compressor Control |
| CC | Compressor Thermal Protector |
| CD | Control Transformer |
| CE | Disconnect Switch |
| CF | Flame Sensor |
| CG | Flame Proving |
| CH | Freeze Sens |
| CI | Ground Lug |
| CJ | High Pressure Control |
| CK | Indoor/Outdoor Motor |
| CL | Integrated Furnace Control |

| ALARM CODES | DESCRIPTION |
|-------------|--|
| 0 | Stability |
| 1 | Compressor - Low Flushing (in time delay) |
| 2 | Compressor - High Flushing (in time delay) |
| 3 | Economizer Cooling - No Compressor |
| 4 | Continuous Fan |
| 5 | Heat On - Low Stage |
| 6 | Heat On - High Stage |
| 7 | Combin Alert Code 4 for Compressor Circuit 1 |
| 8 | Combin Alert Code 5 for Compressor Circuit 1 |
| 9 | Combin Alert Code 6 for Compressor Circuit 1 |
| 10 | Combin Alert Code 7 for Compressor Circuit 1 |
| 11 | Combin Alert Code 8 for Compressor Circuit 1 |
| 12 | Combin Alert Code 9 for Compressor Circuit 1 |
| 13 | Failed On/Off |
| 14 | Low Flame Sense |
| 15 | Flame Lost |
| 16 | Unprotected Flame |
| 17 | 2 nd Stage Gas Valve Inoperable Voltage |
| 18 | Refrigerant Low Pressure Switch Open - Circuit 1 |
| 19 | Refrigerant Low Pressure Switch Open - Circuit 2 |
| 20 | Max Limit Open |
| 21 | Refrigerant High Pressure Switch Open - Circuit 1 |
| 22 | Refrigerant High Pressure Switch Open - Circuit 2 |
| 23 | MILC (No Load Limit) Open |
| 24 | Combin Alert Code 4 for Compressor Circuit 2 |
| 25 | Combin Alert Code 5 for Compressor Circuit 2 |
| 26 | Combin Alert Code 6 for Compressor Circuit 2 |
| 27 | Combin Alert Code 7 for Compressor Circuit 2 |
| 28 | Combin Alert Code 8 for Compressor Circuit 2 |
| 29 | Combin Alert Code 9 for Compressor Circuit 2 |
| 30 | Invalid Thermostat Selection |
| 31 | 1 st Stage Combustion Press Switch Closed |
| 32 | 1 st Stage Combustion Press Switch Open |
| 33 | Freeze Switch Open - Circuit 1 |
| 34 | Freeze Switch Open - Circuit 2 |
| 35 | 2 nd Stage Combustion Press Switch Closed |
| 36 | 2 nd Stage Combustion Press Switch Open |
| 37 | Combin Alert Code 4 for Compressor Circuit 1 |
| 38 | Combin Alert Code 5 for Compressor Circuit 1 |
| 39 | Combin Alert Code 6 for Compressor Circuit 1 |
| 40 | Combin Alert Code 7 for Compressor Circuit 1 |
| 41 | Combin Alert Code 8 for Compressor Circuit 1 |
| 42 | Combin Alert Code 9 for Compressor Circuit 1 |
| 43 | Low Voltage |
| 44 | Control Transformer |
| 45 | Disconnect Switch |
| 46 | Flame Sensor |
| 47 | Flame Proving |
| 48 | Freeze Sens |
| 49 | Ground Lug |
| 50 | High Pressure Control |
| 51 | Indoor/Outdoor Motor |
| 52 | Integrated Furnace Control |

NOTES

- CONNECTORS SUITABLE FOR USE WITH COPPER CONDUCTORS ONLY.
- CONNECT FIELD WIRING IN GROUNDING TIGHT CONDUIT TO FUSED DISCONNECT.
- REMOVE JUMPER AT (C1) TO INSTALL LOW AMBIENT ACCESSORY.
- REMOVE JUMPER AT (C2) TO INSTALL LOW AMBIENT ACCESSORY.
- IF REQUIRED, ATTACH CRANKCASE HEATER ACCESSORY TO C1 (L1) AND C2 (L2).
- COMPRESSOR MOTOR THERMALLY PROTECTED. ALL 3 PHASE MODELS ARE THERMALLY PROTECTED.
- TRANSFORMER FACTORY WIRED AS SHOWN BELOW. CHANGE PRIMARY VOLTAGE CONNECTIONS FOR ALTERNATE VOLTAGES, IF REQUIRED.

UNIT VOLTAGES - HZ TRANSFORMER TERM.

| | |
|---------|---------|
| 200 | 200 |
| 230 | 230 |
| 240 | 240 |
| 277 | 277 |
| 380-415 | 380-415 |
| 480 | 480 |
| 575 | 575 |

WIRING INFORMATION

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

REPLACEMENT WIRE SIZE AND TYPE OF INSULATION AS PER NATIONAL ELECTRICAL CODES AND LOCAL REGULATIONS AND NATIONAL WIRING REGULATIONS AND LOCAL CODES AS APPLICABLE.

WARNING

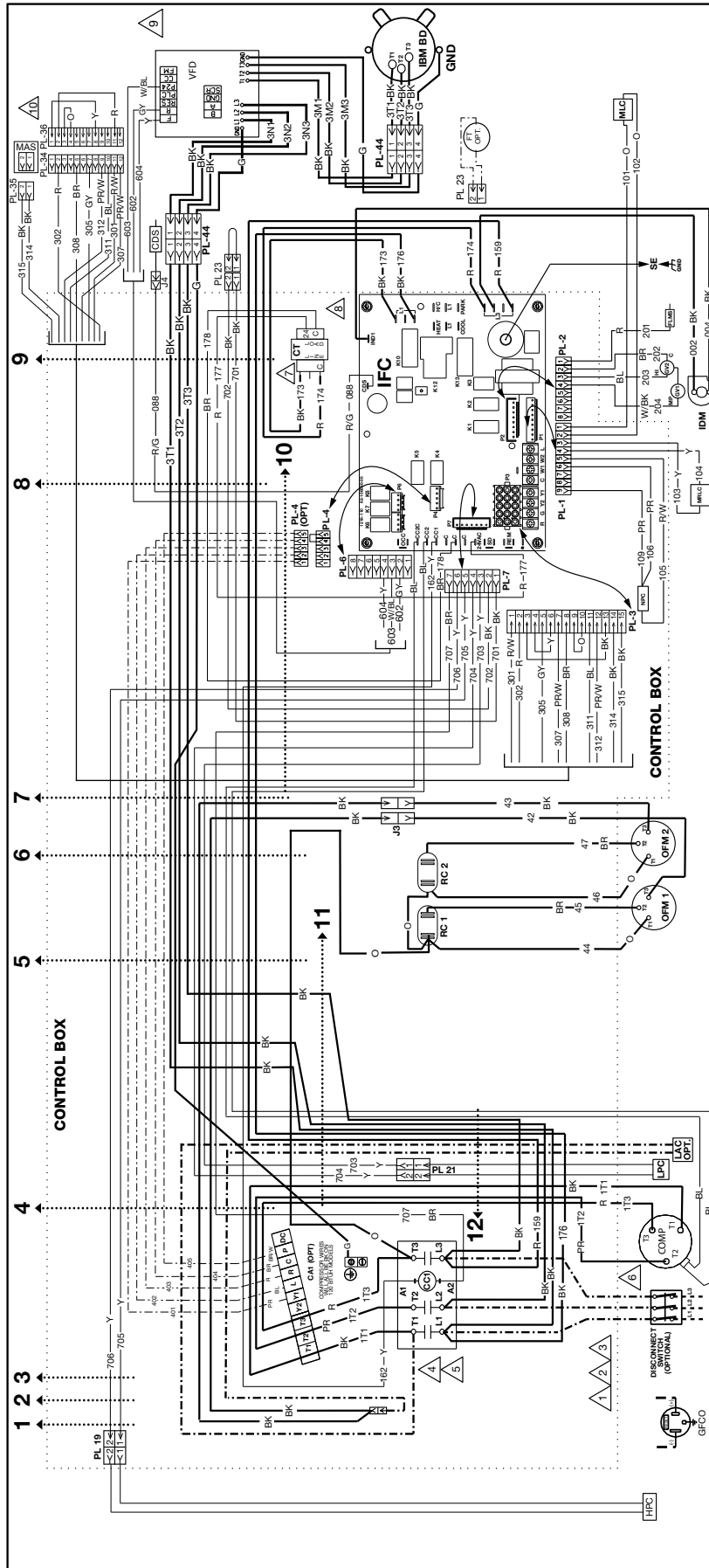
- CABINET MUST BE PERMANENTLY GROUNDED
- WIRING MUST BE PERMANENTLY GROUNDED
- NATIONAL ELECTRICAL CODES AND LOCAL REGULATIONS AND NATIONAL WIRING REGULATIONS AND LOCAL CODES AS APPLICABLE.

| | | |
|-----------------|-----------------|-----------------------|
| APPROVED: | CHECKED: | ORIGINAL RELEASE NO.: |
| MODELED BY: JHB | DATE: 9/19/2018 | R-1071S208 |
| PART NO.: | 90-106178-08 | REV: 00 |

ELECTRICAL WIRING SCHEMATIC

GE NON DDC 2-STG 150
575V 3PH 60HZ

FIGURE 37



| WIRING INFORMATION | |
|--|--------------------------------------|
| LINE VOLTAGE | 200-230-50/60 |
| -FACTORY STANDARD | 200-230-50/60 |
| -FIELD INSTALLED | 200-230-50/60 |
| LOW VOLTAGE | 115-230-50/60 |
| -FACTORY STANDARD | 115-230-50/60 |
| -FIELD INSTALLED | 115-230-50/60 |
| REPLACEMENT WIRE | SEE AND TYPE |
| OF INSULATION AS ORIGINAL | (100°C MIN) |
| WARNING | CABINET MUST BE PERMANENTLY GROUNDED |
| AND CONFORM TO I.E.C., N.E.C., C.E.C., | AND LOCAL REGULATIONS, AND LOCAL |
| CODES AS APPLICABLE. | |

| WIRING INFORMATION | |
|---|-----------------|
| 1. CONNECTORS SUITABLE FOR USE WITH COPPER CONDUCTORS ONLY. | |
| 2. CONNECT FIELD WIRING IN GROUNDED RAIN TIGHT CONDUIT TO FUSED DISCONNECT. | |
| 3. CONNECT FIELD WIRE TO COMPRESSOR CONTACTOR (CC). | |
| 4. FIELD WIRING TO COMPRESSOR CONTACTOR (CC) HEATER ACCESSORY TO CC (L1) AND CC (L2). | |
| 5. COMPRESSOR MOTOR THERMALLY PROTECTED - ALL 3 PHASE MODELS ARE PROTECTED UNDER PRIMARY SINGLE PHASE CONDITIONS. | |
| 6. TRANSFORMER FACTORY WIRE AS SHOWN BELOW CHANGE PRIMARY VOLTAGE | |
| 7. TRANSFORMER FACTORY WIRE AS SHOWN BELOW CHANGE PRIMARY VOLTAGE | |
| UNIT VOLTAGES - HZ | TRANSFORMER TAP |
| 200-230-50/60 | 200 |
| 208-60/4Z | 230 |
| 230-60/4Z | 230 |
| 380-415-50/60 | 400 |
| 480-60/4Z | 480 |
| 575-60/4Z | 500 |

| NOTES | |
|---|--|
| 8. LOW VOLTAGE CIRCUIT IS I.E.C. CLASS 2 WITH CLASS 2 TRANSFORMER 2VAC 50/60 HZ SUPPLIED. | |
| 9. MOTOR FACTORY WIRED FOR CORRECT VOLTAGE. | |
| 10. REMOVE FUSE FOR ECONOMIZER ACCESSORY. PL 3 AND PL 6 LOCATED IN RETURN AIR SECTION. | |

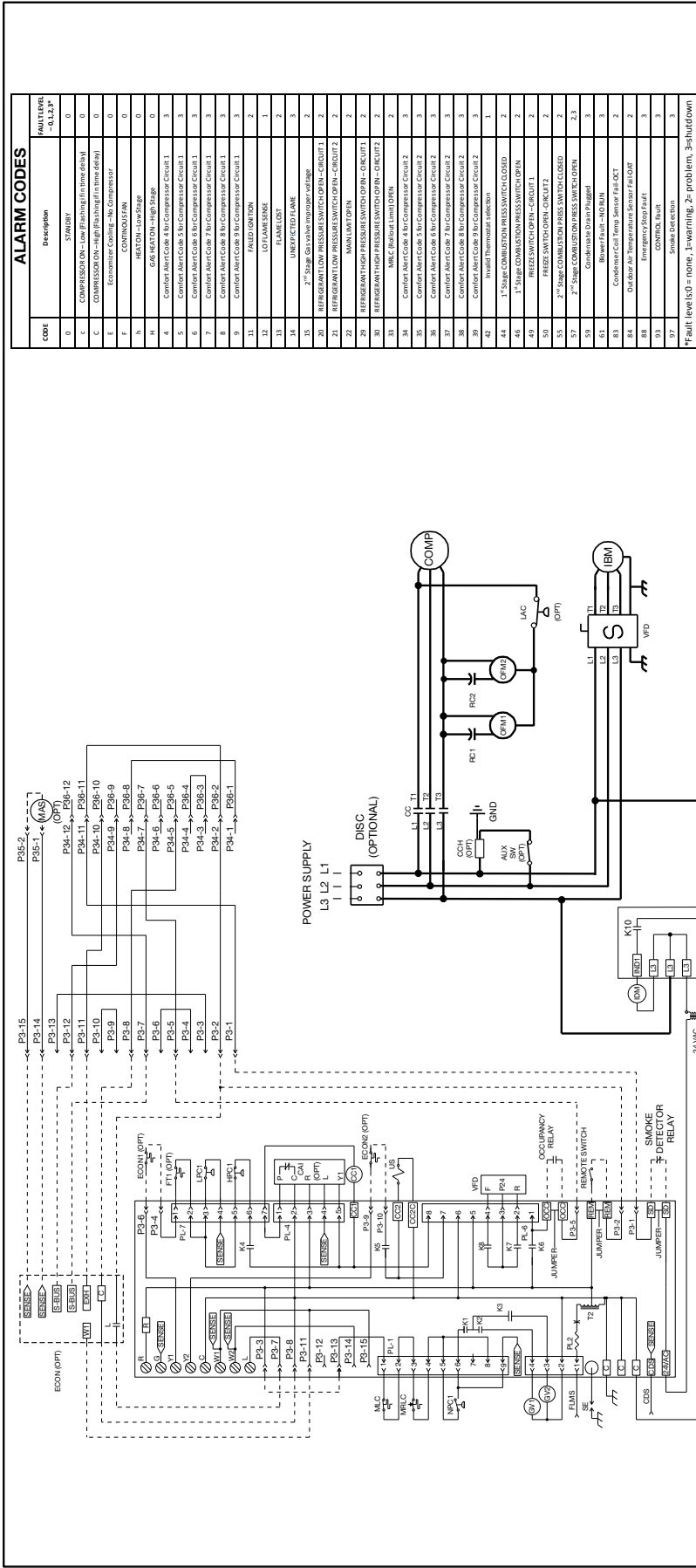
| COMPONENT CODES | |
|-----------------|----------------------------|
| BA | BLOWER CONDUCTOR |
| CA | CAVITY ALERT MODULE |
| CC | COMPRESSOR CONTACTOR |
| CCS | COMPRESSOR SAFETY SWITCH |
| CD | CLOSED DRAIN SENSOR |
| CO | COMPRESSOR SAFETY SWITCH |
| CR | CONDENSATE REMOVAL SWITCH |
| CS | COSMETIC AIR SENSER |
| DCS | DISCONNECT SWITCH |
| DR | DRY RUN PROTECTOR |
| FR | FAN PROTECT |
| GC | GROUNDING CONDUCTOR |
| GL | GROUND LUG |
| HP | HIGH PRESSURE CONTROL |
| IM | INDUCED DRAFT MOTOR |
| LC | LOW CURRENT CONTROL |
| LAC | LOW AMBIENT CONTROL |
| LPC | LOW PRESSURE CONTROL |
| M | MOTOR |
| MC | MANUAL RESET LIMIT CONTROL |
| MFC | MANUAL RESET LIMIT CONTROL |
| OC | OUTSIDE AIR SENSOR WHICH |
| OR | OUTSIDE AIR SENSOR |
| OT | OUTSIDE AIR SENSOR |
| PL | PLUG |
| PT | POWER TRANSFORMER |
| RC | RELAY CONTACTOR |
| RFC | RELAY CONTACTOR |
| RS | RESISTOR |
| RSK | SPARK ELECTRODE |
| SE | SEMI-CONDUCTOR DRIVE |
| VFD | VARIABLE FREQUENCY DRIVE |
| W | WIRE NUT |
| WT | WIRE TIE |

| WIRE COLOR CODE | |
|-----------------|--------|
| BK... | BLACK |
| GR... | GREEN |
| PR... | PURPLE |
| RD... | RED |
| BR... | BROWN |
| GY... | GRAY |
| W... | WHITE |
| BL... | BLUE |
| OR... | ORANGE |
| Y... | YELLOW |
| W... | YELLOW |

| ELECTRICAL WIRING DIAGRAM | |
|----------------------------------|--|
| GE NON DDC 2-STG VFD 090/102/120 | |
| 208/230/480V/3 PH 60 HZ | |

| APPROVED: | CHECKED: | ORIGINAL RELEASE |
|-----------------------|----------------|------------------|
| MODELED: TCAW | DATE: 12-05-17 | NO: R-1071S126 |
| PART NO: 90-106177-09 | REV: 01 | |

FIGURE 38



| CODE | DESCRIPTION | FAULT LEVEL |
|------|--|-------------|
| 0 | STANDBY | 0 |
| 1 | COMPRESSION- Low Pressuring (in time delay) | 0 |
| 2 | COMPRESSION- High Pressuring (in time delay) | 0 |
| 3 | Economizer Cooling- No Compressor | 0 |
| 4 | CONTINUOUS FAN | 0 |
| 5 | HEATON- Low Stage | 0 |
| 6 | GS HEATON- High Stage | 0 |
| 7 | Comfort Alert Code 4 for Compressor Circuit 1 | 3 |
| 8 | Comfort Alert Code 5 for Compressor Circuit 1 | 3 |
| 9 | Comfort Alert Code 6 for Compressor Circuit 1 | 3 |
| 10 | Comfort Alert Code 7 for Compressor Circuit 1 | 3 |
| 11 | Comfort Alert Code 8 for Compressor Circuit 1 | 3 |
| 12 | Comfort Alert Code 9 for Compressor Circuit 1 | 3 |
| 13 | LO FLAME SENSE | 2 |
| 14 | FLAME LOCK | 2 |
| 15 | UNEXPECTED FLAME | 3 |
| 16 | 2 nd Stage Gas Valve Inoperable Voltage | 2 |
| 17 | REFRIGERANT LOW PRESSURE SWITCH OPEN-CIRCUIT 1 | 2 |
| 18 | REFRIGERANT LOW PRESSURE SWITCH OPEN-CIRCUIT 2 | 2 |
| 19 | MANUAL LIMIT OPEN | 2 |
| 20 | REFRIGERANT HIGH PRESSURE SWITCH OPEN-CIRCUIT 1 | 2 |
| 21 | REFRIGERANT HIGH PRESSURE SWITCH OPEN-CIRCUIT 2 | 2 |
| 22 | MFC Refuel Limit OPEN | 2 |
| 23 | Comfort Alert Code 4 for Compressor Circuit 2 | 3 |
| 24 | Comfort Alert Code 5 for Compressor Circuit 2 | 3 |
| 25 | Comfort Alert Code 6 for Compressor Circuit 2 | 3 |
| 26 | Comfort Alert Code 7 for Compressor Circuit 2 | 3 |
| 27 | Comfort Alert Code 8 for Compressor Circuit 2 | 3 |
| 28 | Comfort Alert Code 9 for Compressor Circuit 2 | 3 |
| 29 | Invalid Thermostat selection | 1 |
| 30 | 1 st Stage COMBUSTION PRESS SWITCH CLOSED | 2 |
| 31 | FREEZE SWITCH OPEN-CIRCUIT 1 | 2 |
| 32 | FREEZE SWITCH OPEN-CIRCUIT 2 | 2 |
| 33 | 2 nd Stage COMBUSTION PRESS SWITCH CLOSED | 2 |
| 34 | Condensate Drain Plugged | 3 |
| 35 | Blower Fault- NO RUN | 3 |
| 36 | Condenser Coil Temp Sensor Fail-OC | 2 |
| 37 | Outdoor Air Temperature Sensor Fail-OC | 2 |
| 38 | Emergency Stop Fault | 3 |
| 39 | CONTROL Fault | 3 |
| 40 | Smoke Detection | 3 |

WIRE COLOR CODE

| | | |
|--------------|--------------|---------------|
| BK.....BLACK | G.....GREEN | RL.....PURPLE |
| BR.....BROWN | GY.....GRAY | R.....RED |
| BL.....BLUE | O.....ORANGE | W.....WHITE |
| | | Y.....YELLOW |

ELECTRICAL WIRING SCHEMATIC

GE NON DDC 2-5TG VFD 080/102/120
209/230/460V 3 PH 60 Hz

APPROVED: _____ **CHECKED:** _____ **NO. ORIGINAL RELEASE**

MODELED BY: TEH **DATE:** 12-09-17 **NO. R-1071S126**

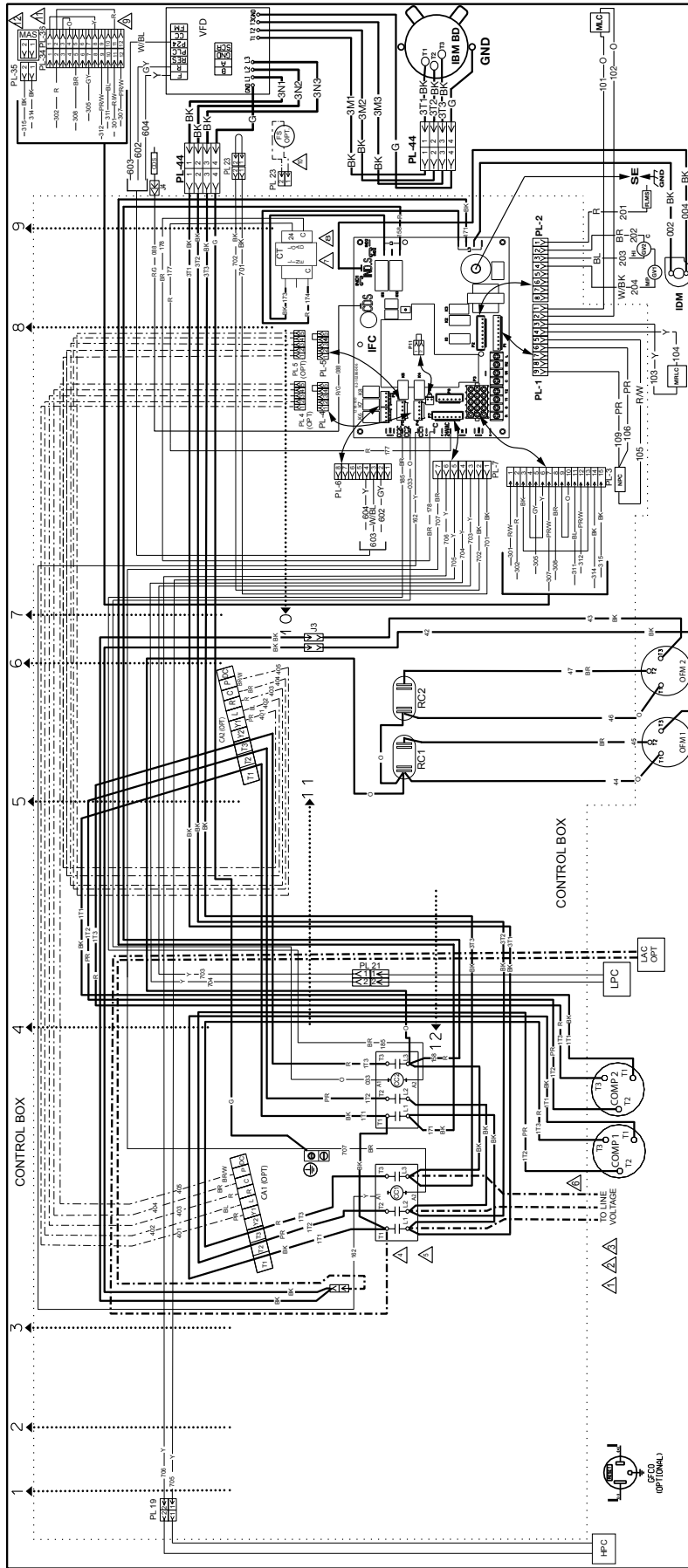
PART NO.: 90-106178-09 **REV:** 02

- COMPONENT CODES**
- LPC LOW PRESSURE CONTROL
 - MAS MATED AIR SENSOR
 - MRC MANUAL RESET LIMIT SWITCH
 - MFC MFC FUEL METER
 - OC OUTSIDE AIR SENSOR
 - OAT OUTSIDE AIR SENSOR
 - OT OUTDOOR FAN MOTOR
 - PT POWER TRANSFORMER
 - RA REFRIGERANT PRESSURE SWITCH
 - RC REFRIGERANT PRESSURE SWITCH
 - RS REFRIGERANT PRESSURE SWITCH
 - RU REFRIGERANT PRESSURE SWITCH
 - US UNLOADER SENSING DRIVE
 - VFD VARIABLE FREQUENCY DRIVE

- NOTES**
- CONNECTORS SUITABLE FOR USE WITH COPPER CONDUCTORS ONLY.
 - CONNECT FIELD WIRING IN GROUNDED RAIN TIGHT CONDUIT TO FUSED DISCONNECT.
 - CONNECT FIELD WIRE TO COMPRESSOR CONTACTOR (CCT).
 - REMOVE U3 AT (CCT) TO INSTALL LOW AMBIENT ACCESSORY.
 - REMOVE P138 FOR ECONOMIZER ACCESSORY.
 - COMPRESSOR MOTOR THERMALLY PROTECTED. ALL 3 PHASE MODELS ARE PROTECTED UNDER PRIMARY SINGLE PHASE CONDITIONS.
 - TRANSFORMER FACTORY WIRING IS SHOWN BELOW CHANGE PRIMARY VOLTAGE CONNECTIONS FOR ALTERNATE VOLTAGES. IF REQUIRED.

- WIRING INFORMATION**
- LINE VOLTAGE
 - FACTORY STANDARD
 - FACTORY OPTION
 - FIELD INSTALLED
 - LOW VOLTAGE
 - FACTORY STANDARD
 - FACTORY OPTION
 - FIELD INSTALLED
- REPLACEMENT WIRE SHALL BE THE SAME SIZE AND TYPE AS THE ORIGINAL (100% MIN).
- WARNING:**
- CABINET MUST BE PERMANENTLY GROUNDED AND CONFORM TO I.E.C., N.E.C., C.E.C., AND LOCAL ELECTRICAL REGULATIONS, AND LOCAL CODES AS APPLICABLE.
- TRANSFORMER TERN:**
- | | |
|----------|-----|
| 230-60HZ | 230 |
| 230-60HZ | 230 |
| 380-60HZ | 400 |
| 380-60HZ | 400 |
| 460-60HZ | 460 |
| 460-60HZ | 460 |
| 575-60HZ | 230 |

FIGURE 39



WIRE COLOR CODE

| | | |
|--------------|--------------|---------------|
| BK.....BLACK | G.....GREEN | PR.....PURPLE |
| BR.....BROWN | GR.....GRAY | R.....RED |
| BL.....BLUE | O.....ORANGE | W.....WHITE |
| | Y.....YELLOW | |

ELECTRICAL WIRING DIAGRAM

GE NON DDC 2-STG VFD 150
208/230/480V 3 PH 60 HZ

COMPONENT CODES

| | |
|-------|----------------------|
| BC | BLOWER CONTACTOR |
| CC | COMPRESSOR CONTACTOR |
| CH | CHAMBER HEATER |
| CS | CLOGGED DRAIN SENSOR |
| CSW | CONTROL SWITCH |
| CT | CONTROL TRANSFORMER |
| DAT | DISCHARGE AIR SENSOR |
| FLS | FLAME SENSOR |
| FP | FAN PROVING |
| FS | FRESH AIR SENSOR |
| GS | GROUNDING |
| GL | GROUND LUG |
| CONV | CONVENIENCE OUTLET |
| IFC | INDUCED DRAFT MOTOR |
| IFC-1 | INDUCED DRAFT MOTOR |
| IFC-2 | INDUCED DRAFT MOTOR |
| J | JUMPER |

- NOTES**
- CONNECTORS SUITABLE FOR USE WITH COPPER CONDUCTORS ONLY.
 - CONNECT FIELD WIRING IN GROUND/BURN TIGHT CONDUIT TO FUSED DISCONNECT.
 - CONNECT FIELD WIRE TO COMPRESSOR CONTACTOR (CC).
 - REMOVE J1 AT (CCT1) TO INSTALL LOW AMBIENT ACCESSORY.
 - REMOVE J1 AT (CCT1) CHAMBER HEATER ACCESSORY TO CCT1 (1 AND CCT1 (2)).
 - COMPRESSOR MOTOR THERMALLY PROTECTED. ALL 3-PHASE MODELS ARE PROTECTED UNDER PRIMARY SINGLE PHASE CONDITIONS.
 - COMPRESSOR FACTORY WIRE AS SHOWN BELOW CHANGE PRIMARY VOLTAGE TO:

| | |
|--------------------|-----|
| TRANSFORMER TERNAL | 200 |
| 200-230-240 VZ | 230 |
| 230-480 VZ | 480 |
| 480-480 VZ | 480 |
| 480-480 VZ | 480 |
| 480-480 VZ | 575 |

- NOTES**
- LOW VOLTAGE CIRCUIT (6 V.E.C. CLASS 2 WITH A CLASS 2 TRANSFORMER 24VAC 50/60 HZ) SUPPLIED.
 - MOTOR FACTORY WIRE FOR CORRECT VOLTAGE.
 - REMOVE J2 JUMPER FOR OPTIONAL FT LOCATED IN BLOWER COMPARTMENT.
 - REMOVE J3 JUMPER FOR ECONOMIZER ACCESSORY FLAME AND PL LOCATED IN RETURN AIR SECTION.
 - WAS ACCESSORY PROVIDED WITH ECONOMIZER PLUS LOCATED IN BLOWER COMPARTMENT.

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

APPROVED: _____

MOODEL: TC:AW

DATE: 02-13-18

CHECKED: _____

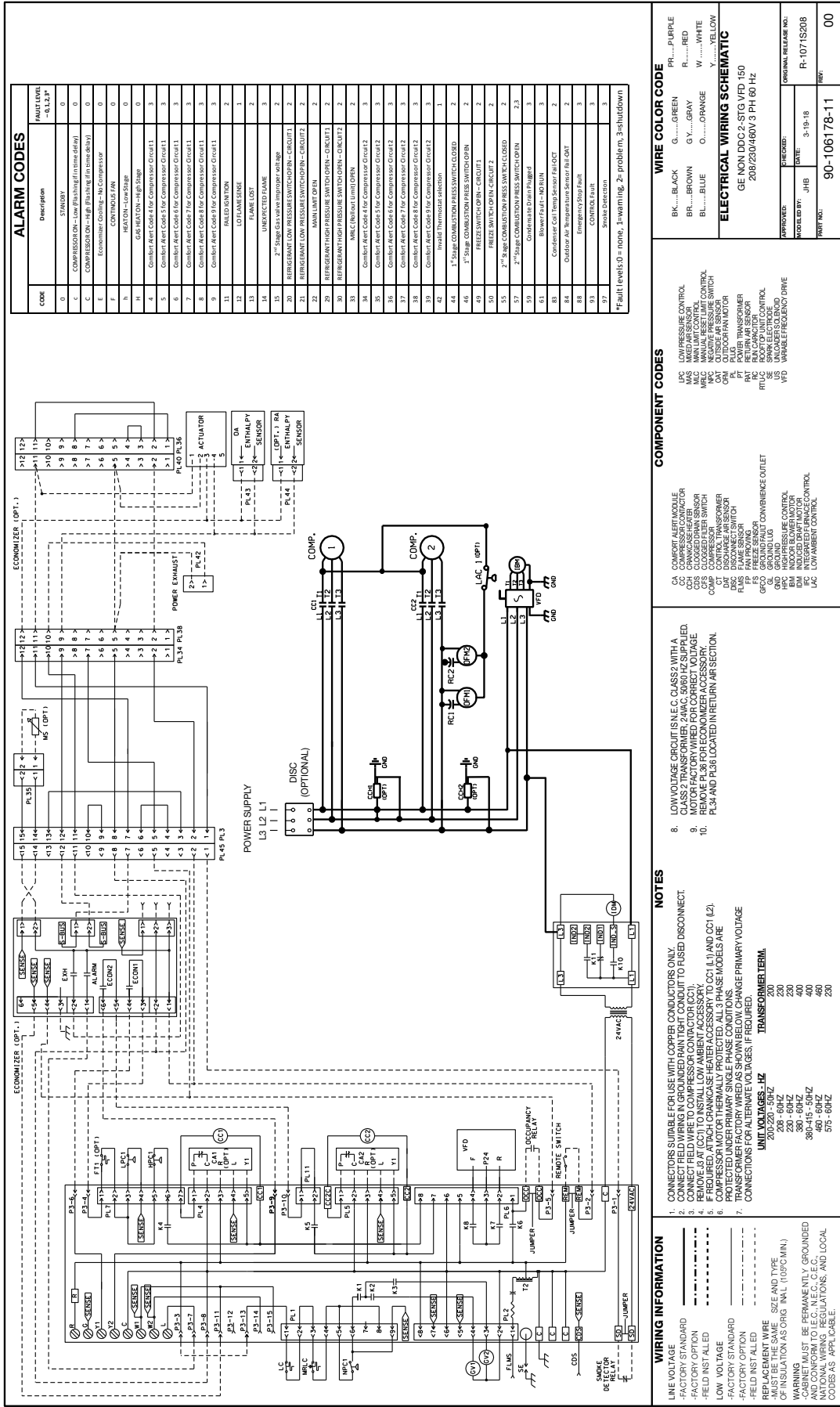
NO.: _____

ORIGINAL RELEASE: _____

PART NO.: 90-106177-11

REV: 00

FIGURE 40



| CODE | Description | FAULT LEVEL |
|------|--|-------------|
| 0 | STANDBY | 0 |
| C | COMPRESSOR ON - Low (Flashing in time delay) | 0 |
| C | COMPRESSOR ON - High (Flashing in time delay) | 0 |
| E | Economizer Cooling - No Compressor | 0 |
| F | CONTINUOUS FAN | 0 |
| H | HEATON - Low Stage | 0 |
| H | HEATON - High Stage | 0 |
| 4 | Combit Alert Code 4 for Compressor Circuit 1 | 3 |
| 5 | Combit Alert Code 5 for Compressor Circuit 1 | 3 |
| 6 | Combit Alert Code 6 for Compressor Circuit 1 | 3 |
| 7 | Combit Alert Code 7 for Compressor Circuit 1 | 3 |
| 8 | Combit Alert Code 8 for Compressor Circuit 1 | 3 |
| 9 | Combit Alert Code 9 for Compressor Circuit 1 | 3 |
| 11 | FAILED SNTN | 2 |
| 12 | LO FLAME SENSE | 1 |
| 13 | FRAME LOCK | 2 |
| 14 | UNEXPECTED FRAME | 3 |
| 15 | 2 nd Stage Gas valve improper voltage | 2 |
| 20 | URGENT LOW PRESSURE SWITCH OPEN - CIRCUIT 1 | 2 |
| 21 | URGENT LOW PRESSURE SWITCH OPEN - CIRCUIT 2 | 2 |
| 22 | MANUAL LIMIT OPEN | 2 |
| 29 | REFRIGERANT HIGH PRESSURE SWITCH OPEN - CIRCUIT 1 | 2 |
| 30 | REFRIGERANT HIGH PRESSURE SWITCH OPEN - CIRCUIT 2 | 2 |
| 33 | WMLC (Refract Limit) OPEN | 2 |
| 34 | Combit Alert Code 4 for Compressor Circuit 2 | 3 |
| 35 | Combit Alert Code 5 for Compressor Circuit 2 | 3 |
| 36 | Combit Alert Code 6 for Compressor Circuit 2 | 3 |
| 37 | Combit Alert Code 7 for Compressor Circuit 2 | 3 |
| 38 | Combit Alert Code 8 for Compressor Circuit 2 | 3 |
| 39 | Combit Alert Code 9 for Compressor Circuit 2 | 3 |
| 42 | Inside thermostat selection | 1 |
| 44 | 1 st Stage COMBUSTION PRESS SWITCH CLOSED | 2 |
| 46 | 1 st Stage COMBUSTION PRESS SWITCH OPEN | 2 |
| 49 | FREEZE SWITCH OPEN - CIRCUIT 1 | 2 |
| 50 | FREEZE SWITCH OPEN - CIRCUIT 2 | 2 |
| 55 | 2 nd Stage COMBUSTION PRESS SWITCH CLOSED | 2,3 |
| 57 | 2 nd Stage COMBUSTION PRESS SWITCH OPEN | 2,3 |
| 59 | Condensate drain Pilotlight | 3 |
| 61 | Blower Fault - NO RUN | 3 |
| 83 | Condenser Coil Temp Sensor Fail OCC | 2 |
| 84 | Outdoor Air Temperature Sensor Fail OCC | 2 |
| 88 | Emergency Stop Fail | 3 |
| 93 | CONTROL Fault | 3 |
| 97 | Sensor Disconnection | 3 |

| COMPONENT CODES |
|------------------------------------|
| LPC LOW PRESSURE CONTROL |
| MAS MIXED AIR SENSOR |
| MCS COMPRESSOR CONTACTOR |
| MRC MANUAL RESET LIMIT CONTROL |
| MSR MANUAL STOP/RESET SWITCH |
| OAT OUTDOOR AIR TEMPERATURE SENSOR |
| ORV OUTDOOR FAN MOTOR |
| PT POWER TRANSFORMER |
| RA REFRIGERANT AIR SENSOR |
| RC REFRIGERANT CONTACTOR |
| RU USE UNEXPECTED FRAME CONTROL |
| US UNEXPECTED FRAME DRIVE |
| VFD VARIABLE FREQUENCY DRIVE |

| ALARM CODES | |
|-------------|--|
| 0 | STANDBY |
| C | COMPRESSOR ON - Low (Flashing in time delay) |
| C | COMPRESSOR ON - High (Flashing in time delay) |
| E | Economizer Cooling - No Compressor |
| F | CONTINUOUS FAN |
| H | HEATON - Low Stage |
| H | HEATON - High Stage |
| 4 | Combit Alert Code 4 for Compressor Circuit 1 |
| 5 | Combit Alert Code 5 for Compressor Circuit 1 |
| 6 | Combit Alert Code 6 for Compressor Circuit 1 |
| 7 | Combit Alert Code 7 for Compressor Circuit 1 |
| 8 | Combit Alert Code 8 for Compressor Circuit 1 |
| 9 | Combit Alert Code 9 for Compressor Circuit 1 |
| 11 | FAILED SNTN |
| 12 | LO FLAME SENSE |
| 13 | FRAME LOCK |
| 14 | UNEXPECTED FRAME |
| 15 | 2 nd Stage Gas valve improper voltage |
| 20 | URGENT LOW PRESSURE SWITCH OPEN - CIRCUIT 1 |
| 21 | URGENT LOW PRESSURE SWITCH OPEN - CIRCUIT 2 |
| 22 | MANUAL LIMIT OPEN |
| 29 | REFRIGERANT HIGH PRESSURE SWITCH OPEN - CIRCUIT 1 |
| 30 | REFRIGERANT HIGH PRESSURE SWITCH OPEN - CIRCUIT 2 |
| 33 | WMLC (Refract Limit) OPEN |
| 34 | Combit Alert Code 4 for Compressor Circuit 2 |
| 35 | Combit Alert Code 5 for Compressor Circuit 2 |
| 36 | Combit Alert Code 6 for Compressor Circuit 2 |
| 37 | Combit Alert Code 7 for Compressor Circuit 2 |
| 38 | Combit Alert Code 8 for Compressor Circuit 2 |
| 39 | Combit Alert Code 9 for Compressor Circuit 2 |
| 42 | Inside thermostat selection |
| 44 | 1 st Stage COMBUSTION PRESS SWITCH CLOSED |
| 46 | 1 st Stage COMBUSTION PRESS SWITCH OPEN |
| 49 | FREEZE SWITCH OPEN - CIRCUIT 1 |
| 50 | FREEZE SWITCH OPEN - CIRCUIT 2 |
| 55 | 2 nd Stage COMBUSTION PRESS SWITCH CLOSED |
| 57 | 2 nd Stage COMBUSTION PRESS SWITCH OPEN |
| 59 | Condensate drain Pilotlight |
| 61 | Blower Fault - NO RUN |
| 83 | Condenser Coil Temp Sensor Fail OCC |
| 84 | Outdoor Air Temperature Sensor Fail OCC |
| 88 | Emergency Stop Fail |
| 93 | CONTROL Fault |
| 97 | Sensor Disconnection |

| WIRE COLOR CODE | | |
|-----------------|-------------|-------------|
| BK...BLACK | G.....GREEN | RL...PURPLE |
| BR...BROWN | GY.....GRAY | R.....RED |
| BL...BLUE | O...ORANGE | W.....WHITE |
|YELLOW | | |

| ELECTRICAL WIRING SCHEMATIC |
|-----------------------------|
| GE NON DDC 2-STG VFD 150 |
| 208/230/460V 3 PH 60 HZ |

COMPONENT CODES

LPC LOW PRESSURE CONTROL
 MAS MIXED AIR SENSOR
 MCS COMPRESSOR CONTACTOR
 MRC MANUAL RESET LIMIT CONTROL
 MSR MANUAL STOP/RESET SWITCH
 OAT OUTDOOR AIR TEMPERATURE SENSOR
 ORV OUTDOOR FAN MOTOR
 PT POWER TRANSFORMER
 RA REFRIGERANT AIR SENSOR
 RC REFRIGERANT CONTACTOR
 RU USE UNEXPECTED FRAME CONTROL
 US UNEXPECTED FRAME DRIVE
 VFD VARIABLE FREQUENCY DRIVE

NOTES

- CONNECTORS SUITABLE FOR USE WITH COOPER CONDUCTORS ONLY
- CONNECT FIELD WIRING IN GROUNDING RAIN TIGHT CONDUIT TO FUSED DISCONNECT
- REMOVE 03A (CCT) TO INSTALL LOW AMBIENT ACCESSORY
- REMOVE 03A (CCT) TO INSTALL LOW AMBIENT ACCESSORY
- COMPRESSOR MOTOR THERMALLY PROTECTED, ALL 3 PHASE MODELS ARE PROTECTED UNDER PRIMARY SINGLE PHASE CONDITIONS
- TRANSFORMER FACTORY WIRING AS SHOWN BELOW, CHANGE PRIMARY VOLTAGE CONNECTIONS FOR ALTERNATE VOLTAGES, IF REQUIRED
- CONNECTIONS FOR ALTERNATE VOLTAGES, IF REQUIRED

WIRING INFORMATION

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

REPLACEMENT WIRE SIZE AND TYPE
 (W/USE THE SAME TYPICALS AND (100% MIN))
 230 - 60HZ
 230 - 60HZ
 400 - 60HZ
 460 - 60HZ
 460 - 60HZ
 575 - 60HZ

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

NOTES

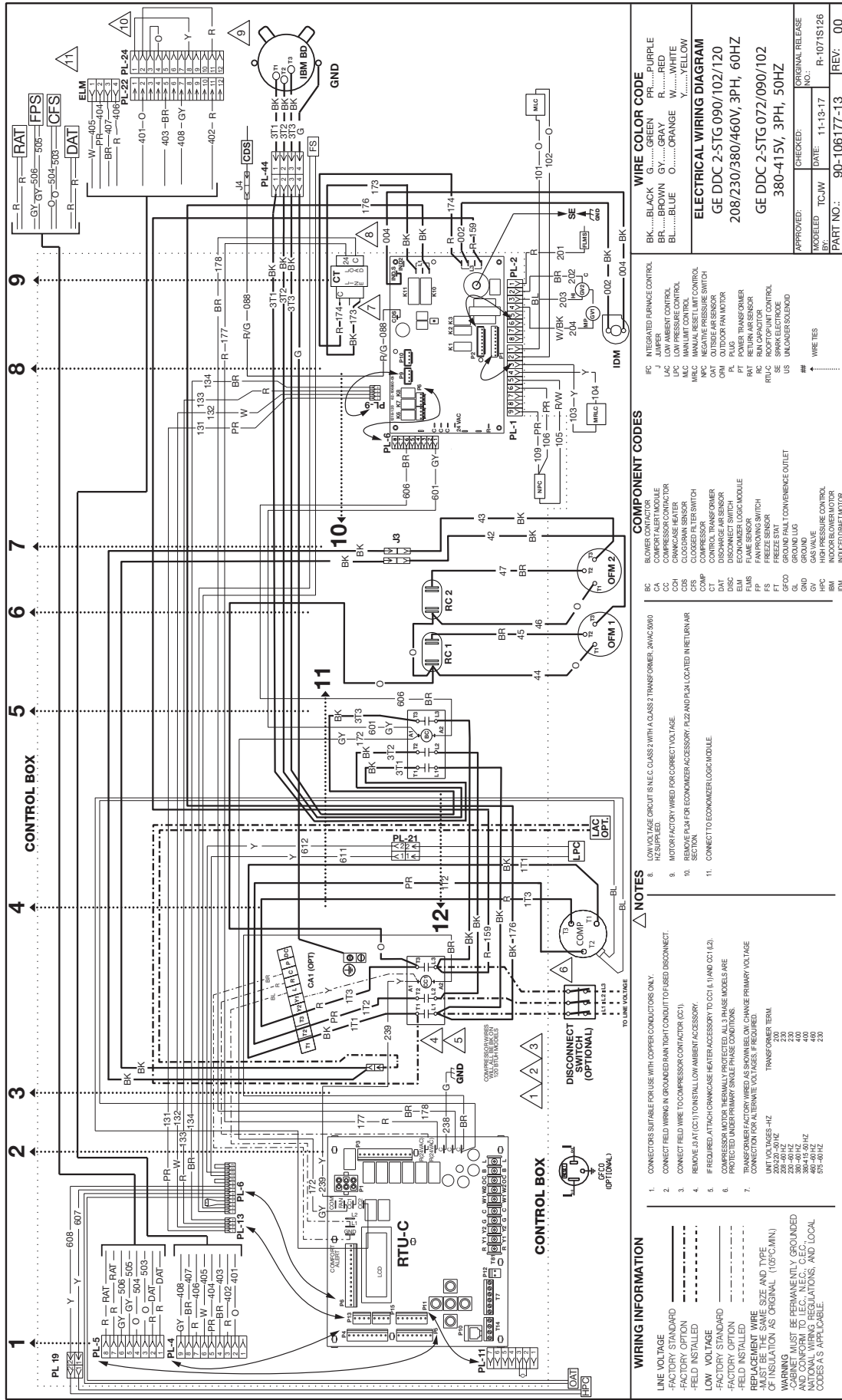
- LOW VOLTAGE CIRCUIT (N.E.C. CLASS 2) W/FLA CLASS 2 SUPPLY
- MOTOR FACTORY WIRING FOR CORRECT VOLTAGE
- REMOVE PL38 FOR ECONOMIZER ACCESSORY
- PL34 AND PL36 LOCATED IN RETURN AIR SECTION

TRANSFORMER TERN.

230
 230 - 60HZ
 400
 460 - 60HZ
 460 - 60HZ
 575 - 60HZ

| APPROVED | DATE | ORIGINAL RELEASE NO. |
|--------------|---------|----------------------|
| JHB | 3-19-18 | R-1071S208 |
| 90-106178-11 | | 00 |

FIGURE 41



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

NOTES

1. CONNECTORS SUITABLE FOR USE WITH COPPER CONDUCTORS ONLY.
2. CONNECT FIELD WIRING IN GROUNDED RAIN TIGHT CONDUIT TO FUSED DISCONNECT.
3. CONNECT FIELD WIRE TO COMPRESSOR CONTACTOR (CCT1).
4. REMOVE JBAT (CCT1) TO INSTALL LOW AMBIENT ACCESSORY.
5. IF REQUIRED, AT TCH CHANGE CASE HEATER ACCESSORY TO CCT1 AND CCT1(L).
6. PROTECT UNDER PRIMARY SINGLE PHASE CONDITIONS.
7. TRANSFORMER FACTORY WIRING AS SHOWN BELOW. CHANGE PRIMARY VOLTAGE CONNECTION FOR ALTERNATE VOLTAGES. PRECOURSED.
- UNIT VOLTAGES -4Z
- 200 200/220-250/12
- 220 220-240/12
- 230 380-415/20
- 400 380-415/20
- 460 380-415/20
- 575-601Z

COMPONENT CODES

- BC BLOWER COIL ALERT MODULE
- CA COMPRESSOR CONTACTOR
- CC CCT1
- CC2 CCT2
- CDS CLOCKWISE SENSOR
- CFS CLOGGED FILTER SWITCH
- COMP COMPRESSOR
- COMP2 COMPRESSOR
- DAT DATA TRANSFER
- DISC DISCONNECT SWITCH
- EAM ECONOMIZER LOGIC MODULE
- EAM2 ECONOMIZER LOGIC MODULE
- FPS FREEZE SENSOR
- FPS2 FREEZE SENSOR
- FT FREEZE STAT
- FT2 FREEZE STAT
- GC2 GROUND LOG
- GROUND GROUND
- INDUCED INDUCED DRAFT MOTOR
- INDUCED2 INDUCED DRAFT MOTOR
- IRV INTEGRATED RANGE CONTROL
- J JUMPER
- LAC LOW AMBIENT CONTROL
- LPC LOW PRESSURE CONTROL
- MRC MANUAL RESET LIMIT CONTROL
- NPC NEGATIVE PRESSURE SWITCH
- OAT OUTSIDE AIR SENSOR
- OAT2 OUTSIDE AIR SENSOR
- PL PLUGS
- PT POWER TRANSFORMER
- RAT RETURN AIR SENSOR
- RAT2 RETURN AIR SENSOR
- RUC ROOFTOP UNIT CONTROL
- SE SPARK ELECTRODE
- US UNDER SOUNDED

WIRE COLOR CODE

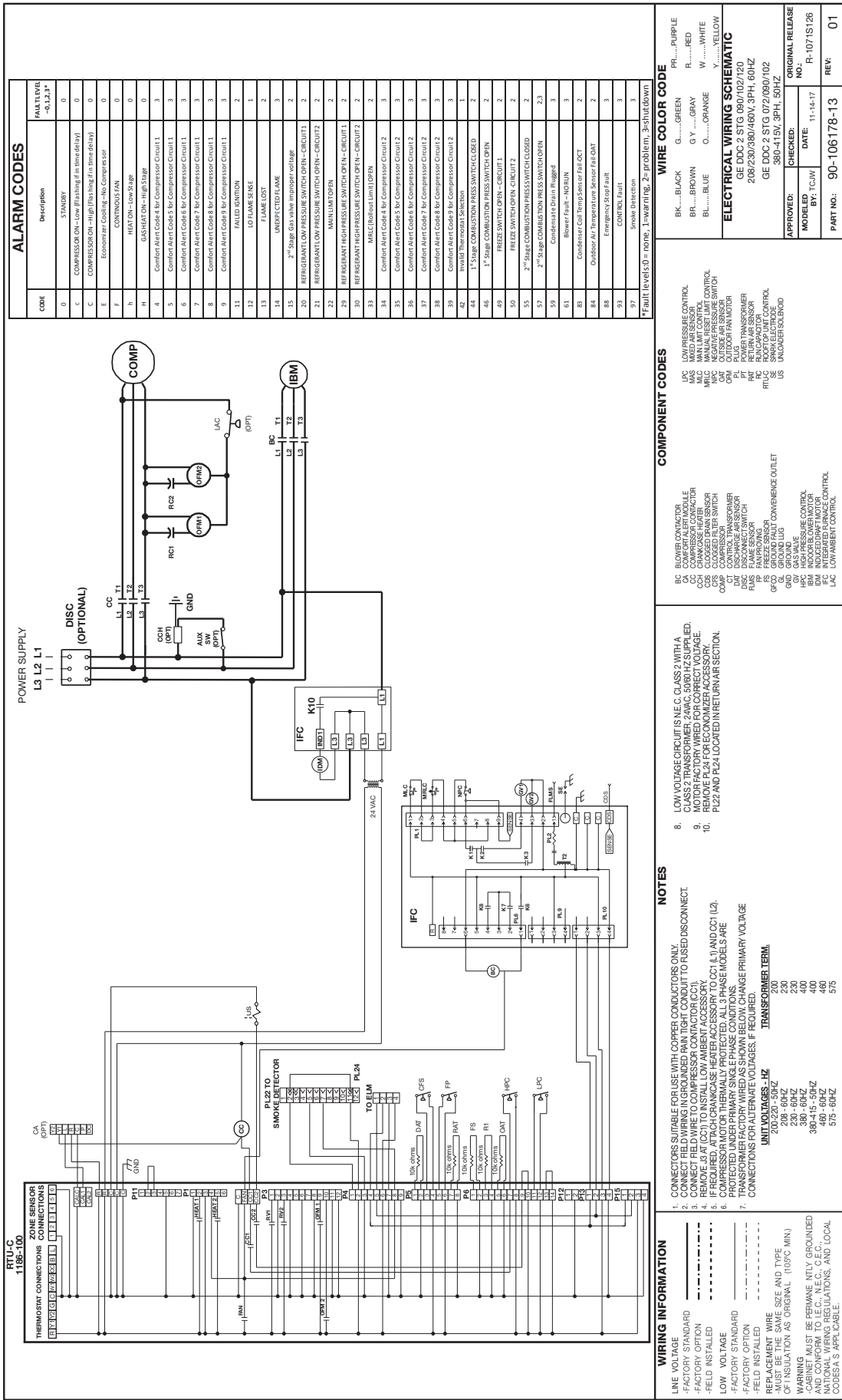
- BK.....BLACK
- G.....GREEN
- PR.....PURPLE
- BR.....BROWN
- RD.....RED
- W.....WHITE
- BL.....BLUE
- OR.....ORANGE
- Y.....YELLOW

ELECTRICAL WIRING DIAGRAM

GE DDC 2-5TG 090/102/120
208/230/380/460V, 3PH, 60HZ
GE DDC 2-5TG 072/090/102
380-415V, 3PH, 50HZ

| | | |
|------------------------|----------------|------------------|
| APPROVED: | CHECKED: | ORIGINAL RELEASE |
| MODELED: TCJW | DATE: 11-19-17 | No.: R-1071S126 |
| PART NO.: 90-106177-13 | | REV: 00 |

FIGURE 42



ALARM CODES

| CODE | Description | FAULT LEVEL (0, 1, 2, 3) |
|------|--|-----------------------------|
| 0 | STANDBY | 0 |
| 1 | COMPRESSOR ON—Low (Flashing if in time delay) | 0 |
| 2 | COMPRESSOR ON—High (Flashing if in time delay) | 0 |
| 3 | Economizer Cooling—No Compressor | 0 |
| 4 | CONTROLS FAN | 0 |
| 5 | HEAT ON—Low Stage | 0 |
| 6 | HEAT ON—High Stage | 0 |
| 7 | Comfort Alert Code 1 for Compressor Circuit 1 | 3 |
| 8 | Comfort Alert Code 2 for Compressor Circuit 1 | 3 |
| 9 | Comfort Alert Code 3 for Compressor Circuit 1 | 3 |
| 10 | Comfort Alert Code 4 for Compressor Circuit 1 | 3 |
| 11 | FAILED IGNITION | 2 |
| 12 | LO FLAME SENSE | 1 |
| 13 | FLAME LOST | 2 |
| 14 | UNEXPECTED FAME | 2 |
| 15 | 2 nd Stage Gas valve improper voltage | 2 |
| 16 | REFRIGERANT LOW PRESSURE SWITCH OPEN—CIRCUIT 1 | 2 |
| 17 | REFRIGERANT LOW PRESSURE SWITCH OPEN—CIRCUIT 2 | 2 |
| 18 | MANUAL TOP IN | 2 |
| 19 | REFRIGERANT HIGH PRESSURE SWITCH OPEN—CIRCUIT 1 | 2 |
| 20 | REFRIGERANT HIGH PRESSURE SWITCH OPEN—CIRCUIT 2 | 2 |
| 21 | MILC (Return Limit) OPEN | 2 |
| 22 | Comfort Alert Code 5 for Compressor Circuit 2 | 3 |
| 23 | Comfort Alert Code 6 for Compressor Circuit 2 | 3 |
| 24 | Comfort Alert Code 7 for Compressor Circuit 2 | 3 |
| 25 | Comfort Alert Code 8 for Compressor Circuit 2 | 3 |
| 26 | Comfort Alert Code 9 for Compressor Circuit 2 | 3 |
| 27 | 1 st Stage COMBUSTION PRESS SWITCH CLOSED | 2 |
| 28 | 1 st Stage COMBUSTION PRESS SWITCH OPEN | 2 |
| 29 | 2 nd Stage COMBUSTION PRESS SWITCH CLOSED | 2 |
| 30 | 2 nd Stage COMBUSTION PRESS SWITCH OPEN | 2 |
| 31 | Condensate Drain Rugged | 3 |
| 32 | Blower Fault—NORUN | 3 |
| 33 | Outdoor Air Temperature Sensor Fail—OCT | 2 |
| 34 | Emergency Stop Fault | 3 |
| 35 | Control Fault | 3 |
| 36 | Smoke Detection | 3 |

WIRE COLOR CODE

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

ELECTRICAL WIRING SCHEMATIC

GE DDC 2 STG 060/102/120
208/230/380/460V, 3PH, 60HZ
GE DDC 2 STG 072/090/102
380-415V, 3PH, 50HZ

COMPONENT CODES

| | |
|------|---------------------------------|
| BC | BLOWER CONTACTOR |
| BS | INDOOR PRESSURE CONTROL |
| MS | INDOOR AIR SENSOR |
| MS | MINI LIMIT CONTROL |
| CC | COMPRESSOR CONTACTOR |
| CC | CONDENSATE PUMP CONTACTOR |
| CH | CRANKCASE HEATER |
| CRS | CLOSED PETER SWITCH |
| CRS | CONTROL TRANSFORMER |
| COMT | COMBUSTION PRESS SWITCH |
| DAT | DISCHARGE AIR SENSOR |
| DAT | DRY CONTACT SWITCH |
| FLS | FLAME SENSOR |
| FP | FAN SPEED SENSOR |
| FP | FAN SPEED SWITCH |
| GF | GROUND FAULT CONVENIENCE OUTLET |
| GF | GROUND FAULT CONVENIENCE OUTLET |
| GV | GAS VALVE |
| GV | GAS PRESSURE CONTROL |
| BM | INDOOR BLOWER MOTOR |
| BM | INDOOR FAN MOTOR |
| IFC | INTEGRATED FURNACE CONTROL |
| LAC | LOW AMBIENT CONTROL |

NOTES

- CONNECTORS SUITABLE FOR USE WITH COPPER CONDUCTORS ONLY.
- CONNECT FURNACE GAS VALVE TO FUSED DISCONNECT.
- CONNECT FIELD WIRE TO COMPRESSOR CONTACTOR.
- REMOVE IS AT (CC1) TO INSTALL LOW AMBIENT ACCESSORY.
- IF REQUIRED, ATTACH CRANKCASE HEATER ACCESSORY TO CC1 (L1) AND CC1 (L2).
- COMPRESSOR MOTOR THERMALLY PROTECTED. ALL 3 PHASE MODELS ARE THERMALLY PROTECTED.
- TRANSFORMER FACTORY WIRE AS SHOWN BELOW. CHANGE PRIMARY VOLTAGE CONNECTIONS FOR ALTERNATE VOLTAGES, IF REQUIRED.

UNIT VOLTAGES - HZ

| | |
|--------------|-----|
| 200-230-50HZ | 200 |
| 208-230-60HZ | 230 |
| 380-415-50HZ | 400 |
| 380-415-60HZ | 460 |
| 480-60HZ | 480 |
| 575-60HZ | 575 |

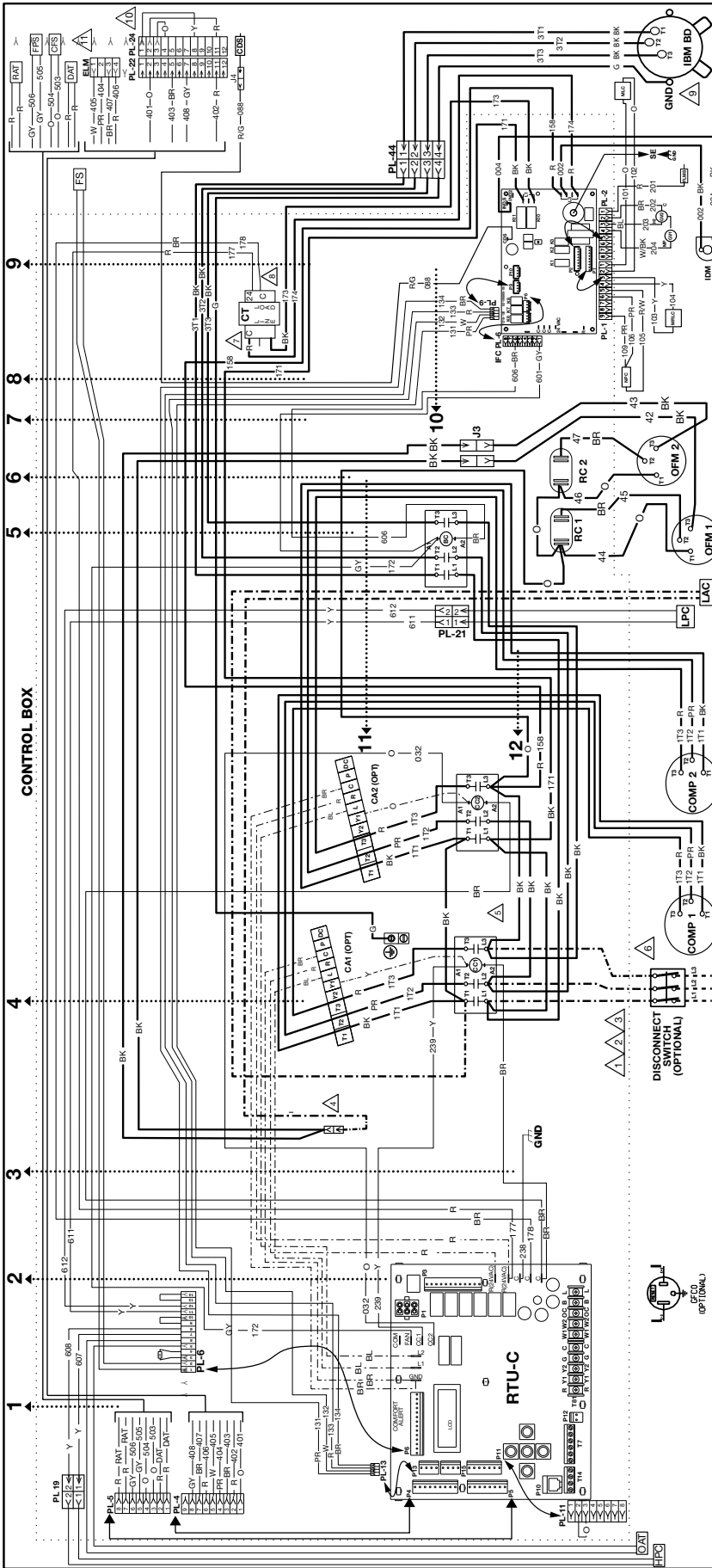
WIRING INFORMATION

LINE VOLTAGE _____
 -FACTORY STANDARD _____
 -FIELD INSTALLED _____
 -FIELD INSTALLED _____
 -FACTORY STANDARD _____
 -FIELD INSTALLED _____
 -FIELD INSTALLED _____
 -MUST BE THE SAME SIZE AND TYPE OF INSULATION AS ORIGINAL (105°C MIN.)
 WARNING
 -CABINET MUST BE PERMANENTLY GROUNDED
 -WIRING MUST BE IN ACCORDANCE WITH ALL APPLICABLE NATIONAL WIRING REGULATIONS, AND LOCAL CODES AS APPL. CABLE.

APPROVED: _____
MODELED BY: ICAW
DATE: 11-14-17
NO.: R-1071S126
REVISION: 01

FAULT LEVELS: 0 = NONE, 1 = WARNING, 2 = PROBLEM, 3 = SHUT-DOWN

FIGURE 45



WIRING INFORMATION

- LINE VOLTAGE
- FACTORY STANDARD
- FACTORY OPTION
- FIELD INSTALLED
- LOW VOLTAGE
- FACTORY STANDARD
- FACTORY OPTION
- REPLACEMENT WIRE
- MUST BE THE SAME SIZE AND TYPE
- EXCEPTION AS ORIGINAL (105°C MIN.)
- WARNING
- CABINET MUST BE PERMANENTLY GROUNDED
- AND CONFORM TO I.E.C., N.E.C., C.E.C.
- CONNECTIONS MUST BE MADE IN ACCORDANCE WITH THE I.E.C., N.E.C., C.E.C. AND LOCAL CODES AND APPROPRIATE.

NOTES

- CONNECTORS SUITABLE FOR USE WITH COPPER CONDUCTORS ONLY.
- CONNECT FELD WIRING IN GROUNDED RAIN TIGHT CONDUIT TO FUSED DISCONNECT.
- REMOVE (A) (C) (T) TO INSTALL LOW AMBIENT ACCESSORY.
- REMOVE (A) (C) (T) TO INSTALL LOW AMBIENT ACCESSORY.
- COMPRESSOR MOTOR THERMALLY PROTECTED, ALL 3-PHASE MODELS ARE PROTECTED UNDER PRIMARY SINGLE-PHASE CONDITIONS.
- CONNECTORS FOR ALTERNATE VOLTAGES, IF REQUIRED.
- TRANSFORMER DATA:

| VOLTS | AMPERES |
|--------------|---------|
| 200-230-594Z | 200 |
| 208-604Z | 200 |
| 230-604Z | 200 |
| 400-604Z | 400 |
| 480-604Z | 400 |
| 575-604Z | 200 |

COMPONENT CODES

- AR ACCESSORY RELAY
- BC BLOWER CONTROLLER
- CC COMPRESSOR CONTACTOR
- CC1 COMPRESSOR CONTACTOR
- CC2 COMPRESSOR CONTACTOR
- CC3 COMPRESSOR CONTACTOR
- CC4 COMPRESSOR CONTACTOR
- CC5 COMPRESSOR CONTACTOR
- CC6 COMPRESSOR CONTACTOR
- CC7 COMPRESSOR CONTACTOR
- CC8 COMPRESSOR CONTACTOR
- CC9 COMPRESSOR CONTACTOR
- CC10 COMPRESSOR CONTACTOR
- CC11 COMPRESSOR CONTACTOR
- CC12 COMPRESSOR CONTACTOR
- CC13 COMPRESSOR CONTACTOR
- CC14 COMPRESSOR CONTACTOR
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- CC72 COMPRESSOR CONTACTOR
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- CC80 COMPRESSOR CONTACTOR
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- CC82 COMPRESSOR CONTACTOR
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- CC84 COMPRESSOR CONTACTOR
- CC85 COMPRESSOR CONTACTOR
- CC86 COMPRESSOR CONTACTOR
- CC87 COMPRESSOR CONTACTOR
- CC88 COMPRESSOR CONTACTOR
- CC89 COMPRESSOR CONTACTOR
- CC90 COMPRESSOR CONTACTOR
- CC91 COMPRESSOR CONTACTOR
- CC92 COMPRESSOR CONTACTOR
- CC93 COMPRESSOR CONTACTOR
- CC94 COMPRESSOR CONTACTOR
- CC95 COMPRESSOR CONTACTOR
- CC96 COMPRESSOR CONTACTOR
- CC97 COMPRESSOR CONTACTOR
- CC98 COMPRESSOR CONTACTOR
- CC99 COMPRESSOR CONTACTOR
- CC100 COMPRESSOR CONTACTOR

WIRE COLOR CODE

- BK...BLACK
- BR...BROWN
- BL...BLUE
- GY...GRAY
- OR...ORANGE
- PR...PURPLE
- RD...RED
- WH...WHITE
- YL...YELLOW

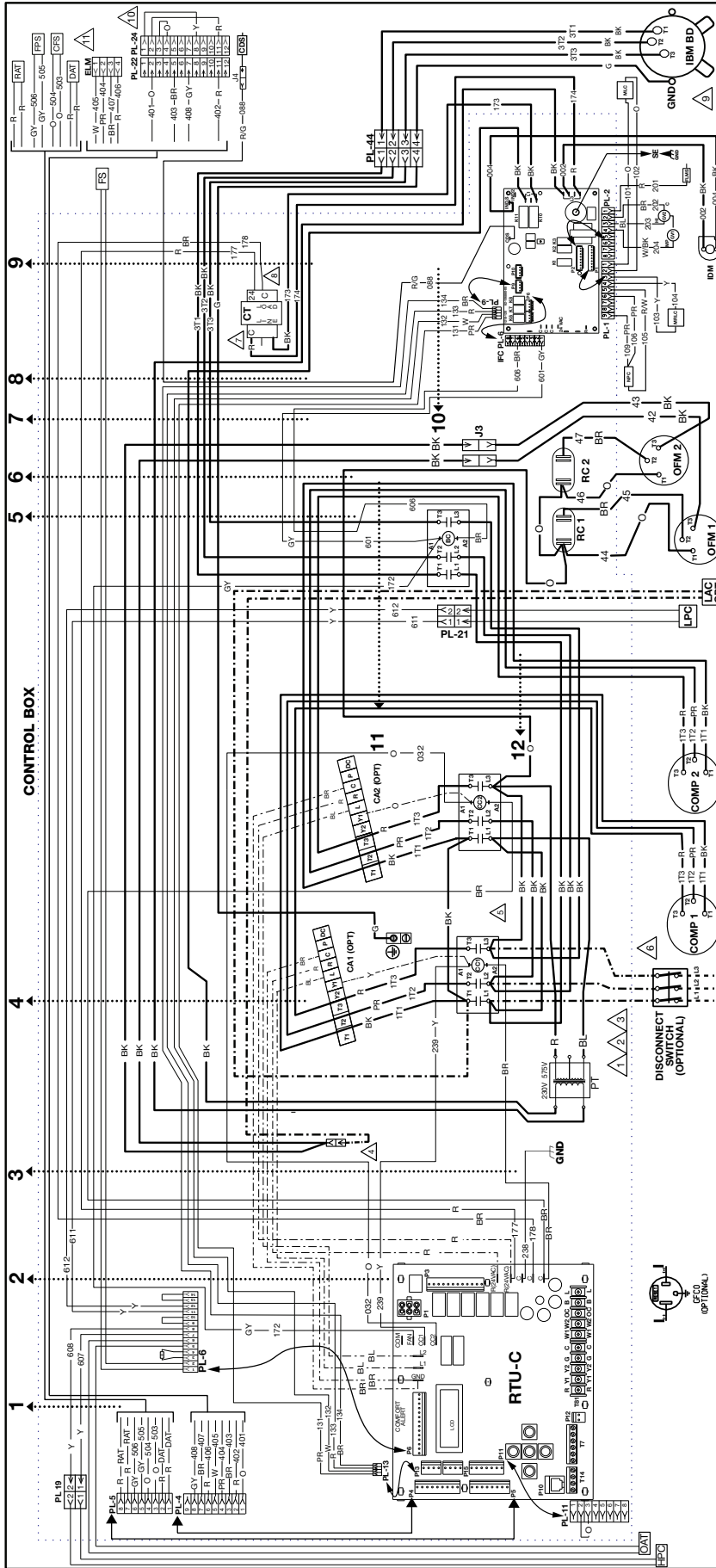
ELECTRICAL WIRING DIAGRAM

GE DDC2 STG. 150
208/230/360/460 V, 3PH, 60HZ

GE DDC2 STG. 120
360/415V, 3PH, 50HZ

APPROVED: _____ DATE: 3/25/18
 DESIGNED BY: JHB
 PART NO.: 90-106177-15
 REV: 00

FIGURE 45



| | | | | | | | | | | | | | | | |
|--|--|--------------|-----|----------|-----|----------|-----|--------------|-----|----------|-----|----------|-----|---|---|
| <p>WIRING INFORMATION</p> <p>LINE VOLTAGE -FACTORY STANDARD -FACTORY OPTION -FIELD INSTALLED</p> <p>LOW VOLTAGE -FACTORY STANDARD -FACTORY OPTION -FIELD INSTALLED</p> <p>REPLACEMENT WIRE -TYPE AND TYPE OF INSULATION AS ORIGINAL (105°C MIN)</p> <p>WARNING -CABINET MUST BE PERMANENTLY GROUNDED AND CONFORM TO I.E.C., N.E.C., C.E.C., AND LOCAL REGULATIONS, AND LOCAL CODES AS APPLICABLE.</p> | <p>NOTES</p> <p>1. CONNECTORS SUITABLE FOR USE WITH COPPER CONDUCTORS ONLY.</p> <p>2. CONNECT FIELD WIRING IN GROUNDED RAIN TIGHT CONDUIT TO FUSED DISCONNECT.</p> <p>3. CONNECT FIELD WIRE TO COMPRESSOR CONTACTOR (CC).</p> <p>4. FIELD WIRING TO COMPRESSOR CONTACTOR (CC) IS REQUIRED WITH CHASER CASE HEATER ACCESSORY TO CC1 (L1) AND CC1 (L2).</p> <p>5. COMPRESSOR MOTOR THERMALLY PROTECTED. ALL 3 PHASE MODELS ARE PROTECTED UNDER PRIMARY SINGLE PHASE CONDITIONS.</p> <p>6. TRANSFORMER FACTORY WIRING AS SHOWN BELOW. CHANGE PRIMARY VOLTAGE TO OPERATE AT OTHER TRANSFORMER TERM.</p> <p>LINE VOLTAGES - HZ</p> <table border="1"> <tr><td>200-230-50/2</td><td>200</td></tr> <tr><td>208-00/2</td><td>230</td></tr> <tr><td>230-00/2</td><td>230</td></tr> <tr><td>380-415-50/2</td><td>400</td></tr> <tr><td>480-00/2</td><td>480</td></tr> <tr><td>575-00/2</td><td>230</td></tr> </table> | 200-230-50/2 | 200 | 208-00/2 | 230 | 230-00/2 | 230 | 380-415-50/2 | 400 | 480-00/2 | 480 | 575-00/2 | 230 | <p>COMPONENT CODES</p> <p>AR ACCESSORY RELAY BC BLAME CONTACTOR CC COMPRESSOR CONTACTOR CCS COMPRESSOR CONTACTOR SWITCH COS CLASS 2 TRANSFORMER CDS CLASS 2 DISCONNECT SWITCH COT CONTROL TRANSFORMER DEC DISCONNECT SWITCH FMS FUSE SENSOR FRS FREEZE SENSOR GFCO GROUND FAULT COMMENCEMENT OUTLET GL GROUND LUG HPC HIGH-PRESSURE CONTROL HPC HIGH-PRESSURE CONTROL IM INDOOR UNIT MOTOR IPC INDOOR UNIT MOTOR CONTROL LPS LOW-PRESSURE CONTROL</p> <p>US LOW-PRESSURE SENSOR WAS WASH SENSOR WPC WASH PRESSURE CONTROL NFC NEUTRAL PRESSURE SWITCH OAT OUTDOOR AIR TEMPERATURE SENSOR OPAC OUTDOOR AIR PRESSURE CONTROL PT POWER TRANSFORMER RAT REFRIGERANT SENSOR RUC REFRIGERANT UNIT CONTROL RUC REFRIGERANT UNIT CONTROL TB TERMINAL BLOCK VFD VARIABLE FREQUENCY DRIVE</p> <p>↑ WIRE TYPE</p> | <p>WIRE COLOR CODE</p> <p>BK...BLACK G...GREEN PR...PURPLE BR...BROWN GR...GRAY R...RED BL...BLUE O...ORANGE W...WHITE Y...YELLOW</p> <p>ELECTRICAL WIRING DIAGRAM</p> <p>GE DDC 2 STG., 57.5V, 3PH, 60HZ</p> <p>APPROVED: [Signature] DATE: 3/25/98 ORIGINAL RELEASE NO.: REDESIGNED BY: JHB R-1071S211 PART NO.: 90-106177-16 REV: 00</p> |
| 200-230-50/2 | 200 | | | | | | | | | | | | | | |
| 208-00/2 | 230 | | | | | | | | | | | | | | |
| 230-00/2 | 230 | | | | | | | | | | | | | | |
| 380-415-50/2 | 400 | | | | | | | | | | | | | | |
| 480-00/2 | 480 | | | | | | | | | | | | | | |
| 575-00/2 | 230 | | | | | | | | | | | | | | |

FIGURE 46

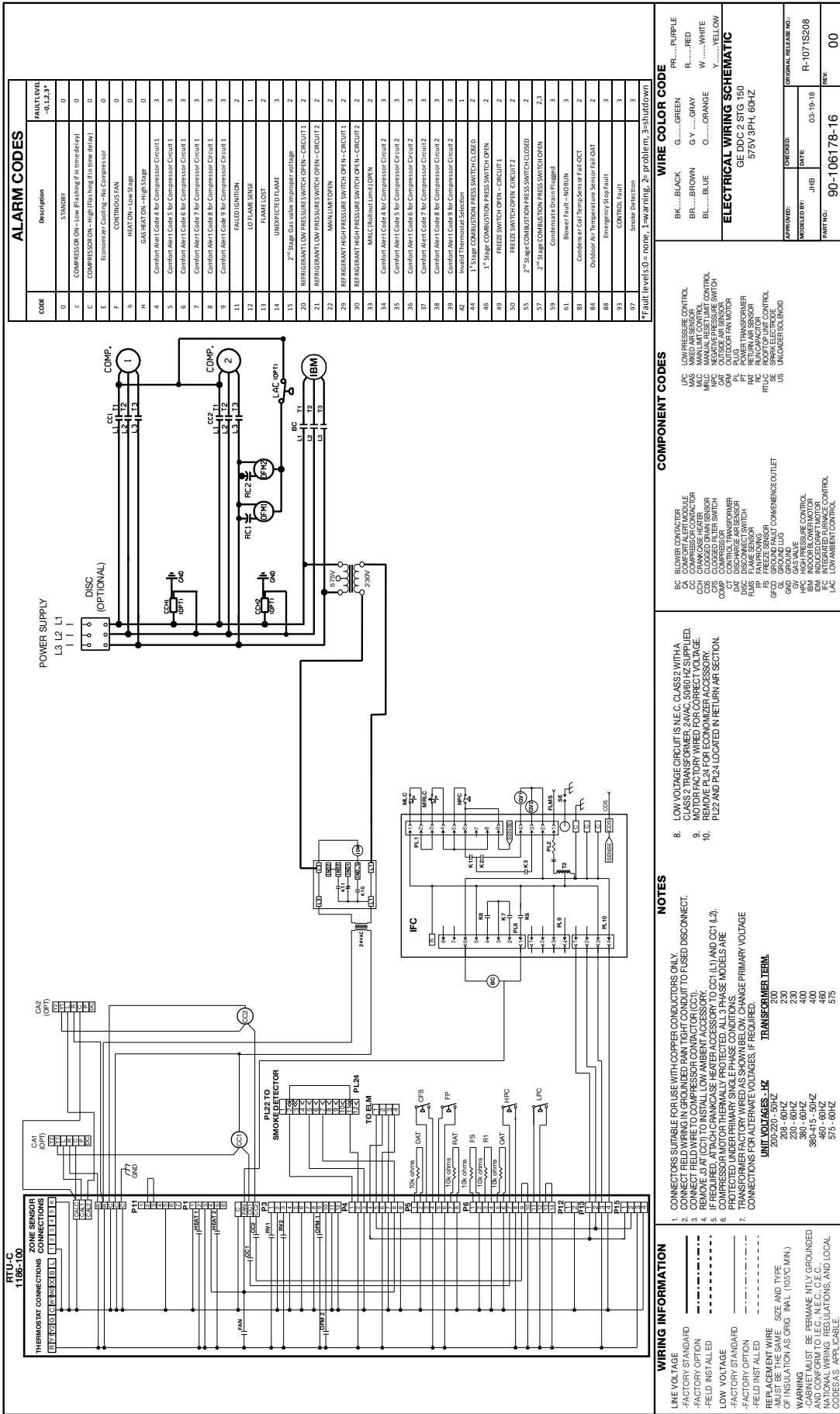
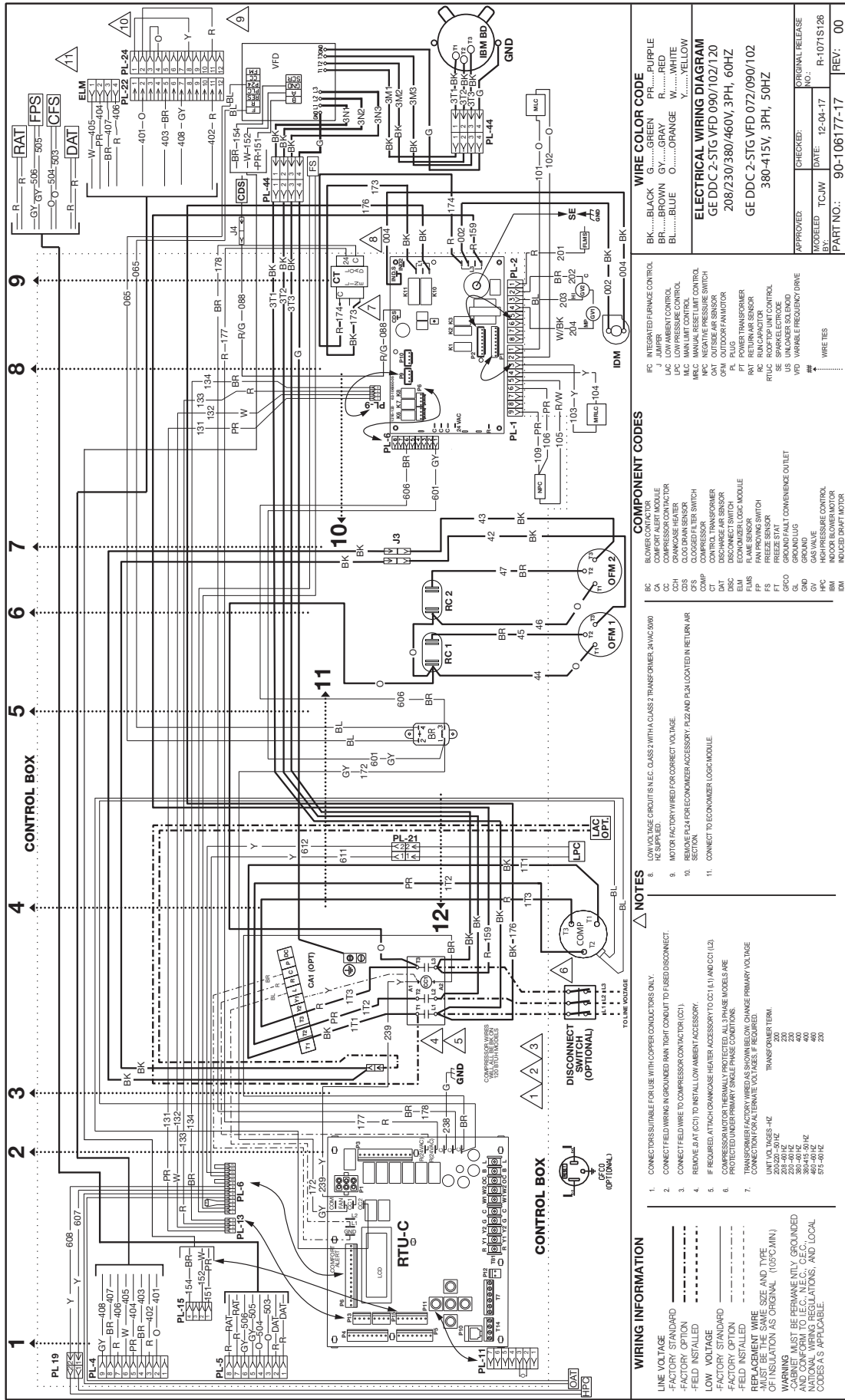


FIGURE 47



WIRING INFORMATION

- LINE VOLTAGE
- FACTORY STANDARD
- FACTORY OPTION
- FIELD INSTALLED
- LOW VOLTAGE
- FACTORY STANDARD
- FACTORY OPTION
- FIELD INSTALLED
- REPLACEMENT WIRE SIZE AND TYPE
- FACTORY STANDARD
- FIELD INSTALLED
- WARNING
- CABINET MUST BE PERMANENTLY GROUNDED AND CONFORM TO I.E.C., N.E.C., C.E.C. AND LOCAL REGULATIONS, AND LOCAL CODES AS APPLICABLE.

NOTES

1. CONNECTORS SUITABLE FOR USE WITH COPPER CONDUCTORS ONLY.
2. CONNECT FIELD WIRING IN GROUNDED MAIN TIGHT CONDUIT TO USED DISCONNECT.
3. CONNECT FIELD WIRE TO COMPRESSOR CONTACTOR (CCT).
4. REMOVE #AT (CCT) TO INSTALL LOW AMBIENT ACCESSORY.
5. IF REQUIRED, ATACH CRANKCASE HEATER ACCESSORY TO CCT #1 AND CCT (L2).
6. COMPRESSOR MOTOR THERMALLY PROTECTED, ALL 3-PHASE MODELS ARE PROTECTED UNDER PRIMARY SINGLE PHASE CONDITIONS.
7. TRANSFORMER FACTORY WIRED AS SHOWN BELOW, CHANGE PRIMARY VOLTAGE CONNECTION FOR ALTERNATE VOLTAGES, IF REQUIRED.

COMPONENT CODES

- BC BLOWER CONTACTOR
- CA COMFORT ALERT MODULE
- CAH COMPRESSOR ALERT HEATER
- CCS COMPRESSOR CASE SENSORS
- CFS CLOSURE FILTER SWITCH
- CT CONTROL TRANSFORMER
- DAT DISCHARGE AIR SENSOR
- DSC DISCONNECT SWITCH
- ELMS ELIMINATOR LOGIC MODULE
- FP FAN PROXIMITY SWITCH
- FS FREEZE SENSOR
- GL GROUND LUG
- GNL GROUND
- HM HIGH PRESSURE CONTROL
- IM INDOOR BLOWER MOTOR
- IDM INDUCED DRAFT MOTOR

WIRE COLOR CODE

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

ELECTRICAL WIRING DIAGRAM

GE DDC 2-5TG VFD 090/102/120
208/230/380/460V, 3PH, 60HZ
GE DDC 2-5TG VFD 072/090/102
380-415V, 3PH, 50HZ

| | | |
|------------------------|---------|------------------|
| APPROVED | CHECKED | ORIGINAL RELEASE |
| NO. 12-04-17 | DATE | R-1071S126 |
| TCJ:W | NO. | |
| PART NO.: 90-106177-17 | REV: 00 | |

FIGURE 48

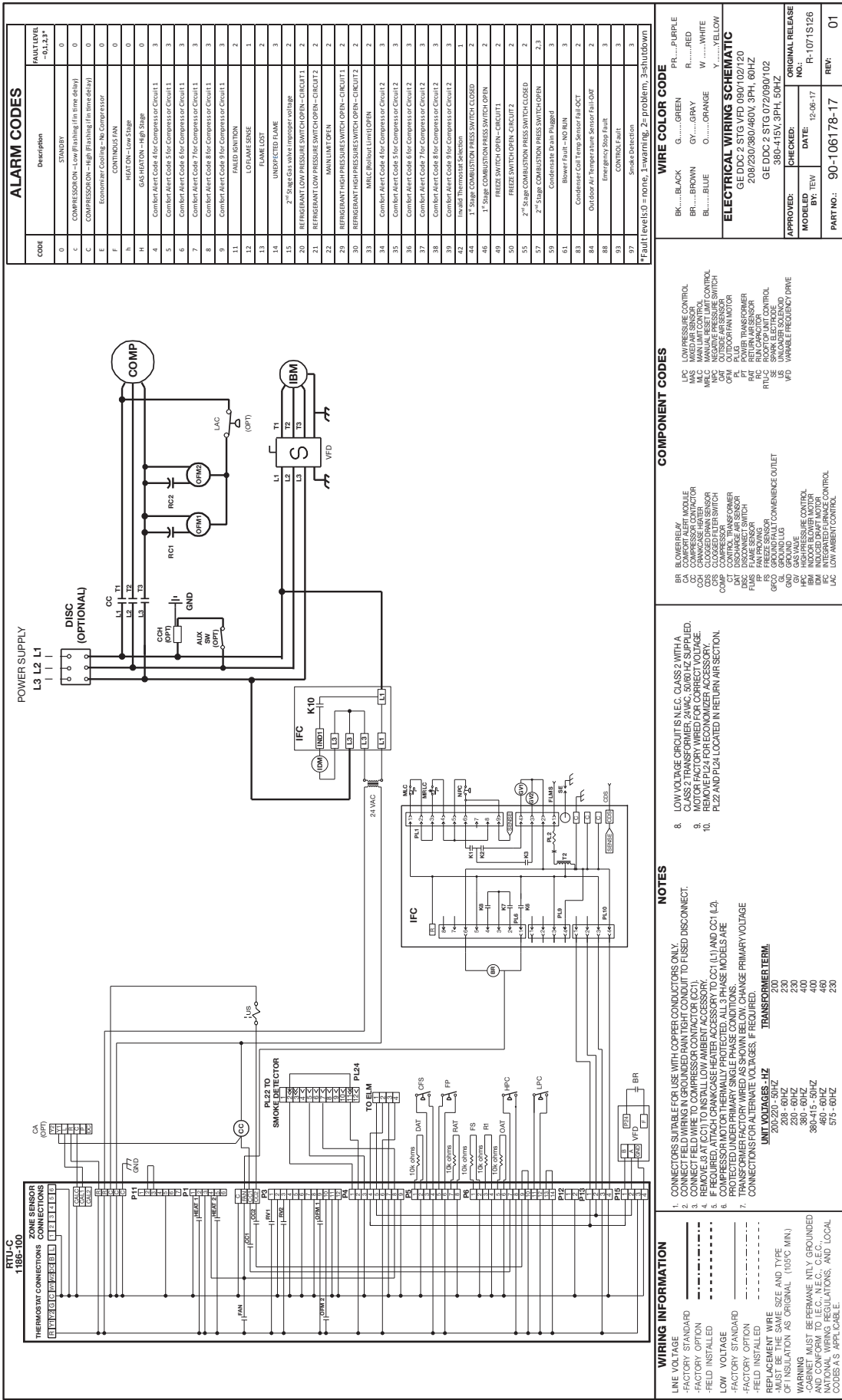
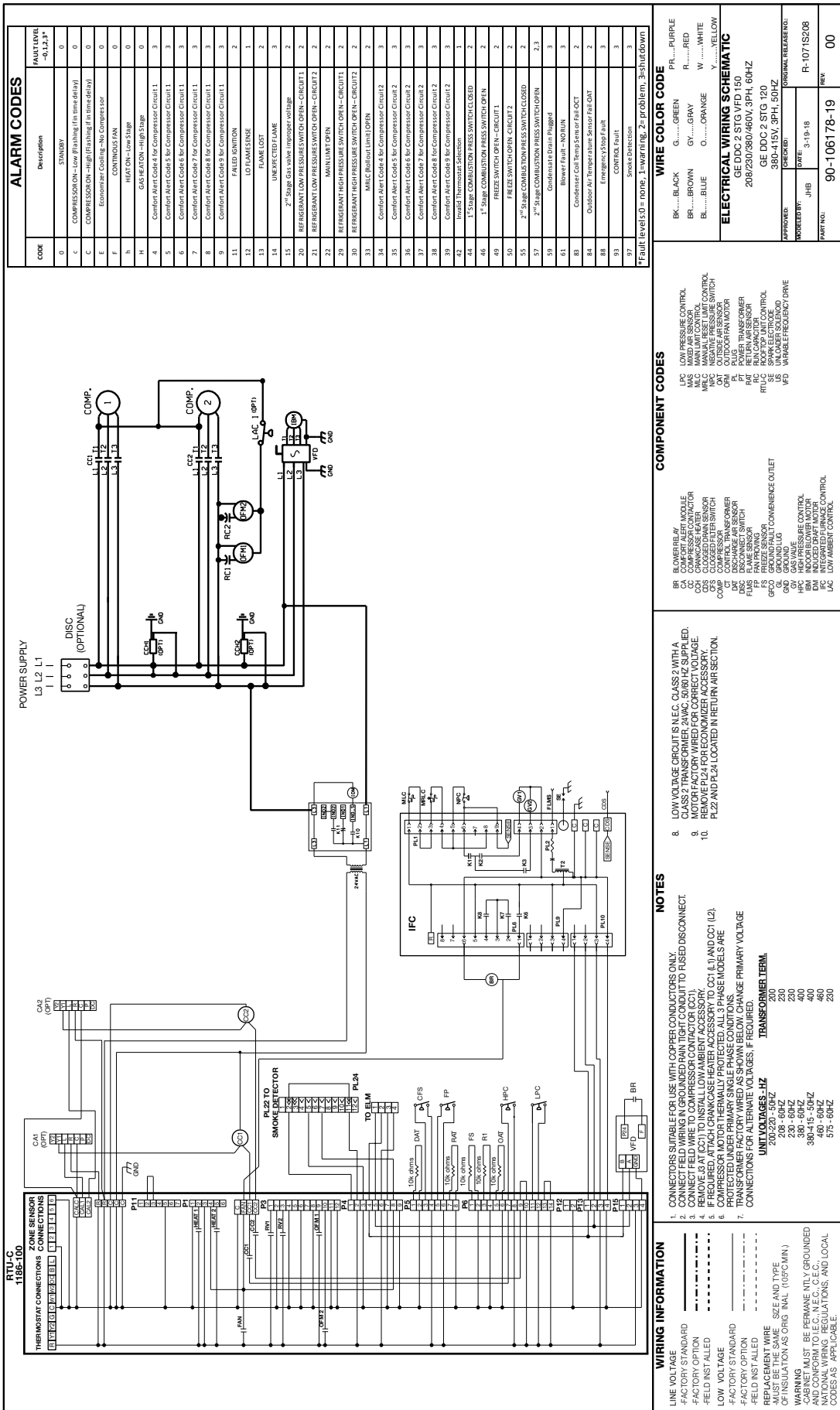


FIGURE 50



ALARM CODES

| CODE | Description | FAULT LEVEL (0-4) |
|------|---|-------------------|
| 0 | STANDBY | 0 |
| 1 | COMPRESSION—Low (flashing in time delay) | 0 |
| 2 | COMPRESSION—High (flashing in time delay) | 0 |
| 3 | Economizer Cooling—No Compressor | 0 |
| 4 | CONTINUOUS FAN | 0 |
| 5 | HEAT ON—Low Stage | 0 |
| 6 | GAS HEATON—High Stage | 0 |
| 7 | Comfort Alert Code 4 for Compressor Circuit 1 | 3 |
| 8 | Comfort Alert Code 5 for Compressor Circuit 1 | 3 |
| 9 | Comfort Alert Code 6 for Compressor Circuit 1 | 3 |
| 10 | Comfort Alert Code 7 for Compressor Circuit 1 | 3 |
| 11 | Comfort Alert Code 8 for Compressor Circuit 1 | 3 |
| 12 | Comfort Alert Code 9 for Compressor Circuit 1 | 3 |
| 13 | PAID SENITON | 1 |
| 14 | IO FLAMESENSE | 1 |
| 15 | FLAME LOST | 2 |
| 16 | UNREJECTED FLAME | 3 |
| 17 | 2" Stage Gas Valve Inoperable Voltage | 2 |
| 18 | REFRIGERANT LOW PRESSURE SWITCH OPEN—CIRCUIT 1 | 2 |
| 19 | REFRIGERANT LOW PRESSURE SWITCH OPEN—CIRCUIT 2 | 2 |
| 20 | REFRIGERANT LOW PRESSURE SWITCH OPEN—CIRCUIT 3 | 2 |
| 21 | REFRIGERANT LOW PRESSURE SWITCH OPEN—CIRCUIT 4 | 2 |
| 22 | REFRIGERANT HIGH PRESSURE SWITCH OPEN—CIRCUIT 1 | 2 |
| 23 | REFRIGERANT HIGH PRESSURE SWITCH OPEN—CIRCUIT 2 | 2 |
| 24 | REFRIGERANT HIGH PRESSURE SWITCH OPEN—CIRCUIT 3 | 2 |
| 25 | REFRIGERANT HIGH PRESSURE SWITCH OPEN—CIRCUIT 4 | 2 |
| 26 | MISC (Blowoff Limit) OPEN | 2 |
| 27 | Comfort Alert Code 4 for Compressor Circuit 2 | 3 |
| 28 | Comfort Alert Code 5 for Compressor Circuit 2 | 3 |
| 29 | Comfort Alert Code 6 for Compressor Circuit 2 | 3 |
| 30 | Comfort Alert Code 7 for Compressor Circuit 2 | 3 |
| 31 | Comfort Alert Code 8 for Compressor Circuit 2 | 3 |
| 32 | Comfort Alert Code 9 for Compressor Circuit 2 | 3 |
| 33 | Invalid Thermostat Selection | 1 |
| 34 | 1" Stage COMBUSTION PRESS SWITCH CLOSED | 2 |
| 35 | 2" Stage COMBUSTION PRESS SWITCH OPEN | 2 |
| 36 | FREEZE SWITCH OPEN—CIRCUIT 1 | 2 |
| 37 | FREEZE SWITCH OPEN—CIRCUIT 2 | 2 |
| 38 | FREEZE SWITCH OPEN—CIRCUIT 3 | 2 |
| 39 | FREEZE SWITCH OPEN—CIRCUIT 4 | 2 |
| 40 | 2" Stage COMBUSTION PRESS SWITCH OPEN | 2 |
| 41 | 2" Stage COMBUSTION PRESS SWITCH OPEN | 2 |
| 42 | 2" Stage COMBUSTION PRESS SWITCH OPEN | 2 |
| 43 | 2" Stage COMBUSTION PRESS SWITCH OPEN | 2 |
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| 89 | 2" Stage COMBUSTION PRESS SWITCH OPEN | 2 |
| 90 | 2" Stage COMBUSTION PRESS SWITCH OPEN | 2 |
| 91 | 2" Stage COMBUSTION PRESS SWITCH OPEN | 2 |
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| 93 | 2" Stage COMBUSTION PRESS SWITCH OPEN | 2 |
| 94 | 2" Stage COMBUSTION PRESS SWITCH OPEN | 2 |
| 95 | 2" Stage COMBUSTION PRESS SWITCH OPEN | 2 |
| 96 | 2" Stage COMBUSTION PRESS SWITCH OPEN | 2 |
| 97 | 2" Stage COMBUSTION PRESS SWITCH OPEN | 2 |

WIRE COLOR CODE

| | | |
|--------------|---------------|---------------|
| BL.....BLACK | G.....GREEN | PR.....PURPLE |
| BR.....BROWN | GY.....GRAY | R.....RED |
| BU.....BLUE | OR.....ORANGE | W.....WHITE |
| | | Y.....YELLOW |

ELECTRICAL WIRING SCHEMATIC

GE DDC 2 STG 100
380-415V, 3PH, 50/60HZ

APPROVED: [Signature]
DATE: 3-19-18
ORIGINAL RELIANT NO. R-1071S208

COMPONENT CODES

- BA BLOWER BY
- CA COMFORT ALERT MODULE
- COA COASTAL ALERT CONTROL
- CSA CASHWASHE HEATER
- CSO CASHWASHE HEATER
- CSR CASHWASHE HEATER
- CSW CASHWASHE HEATER
- CSX CASHWASHE HEATER
- CSY CASHWASHE HEATER
- CSZ CASHWASHE HEATER
- CSA CASHWASHE HEATER
- CSO CASHWASHE HEATER
- CSR CASHWASHE HEATER
- CSW CASHWASHE HEATER
- CSX CASHWASHE HEATER
- CSY CASHWASHE HEATER
- CSZ CASHWASHE HEATER

NOTES

- CONNECTORS SUITABLE FOR USE WITH COPPER CONDUCTORS ONLY.
- CONNECT FIELD WIRING IN GROUNDED RAIN TIGHT CONDUIT TO FUSED DISCONNECT.
- CONNECT FIELD WIRE TO COMPRESSOR CONTACTOR (CCT).
- CONNECT FIELD WIRE TO COMPRESSOR CONTACTOR (CCT).
- IF REQUIRED, ATTACH CRANKCASE HEATER ACCESSORY TO CCT (L1) AND CCT (L2).
- COMPRESSOR MOTOR THERMALLY PROTECTED. ALL 3 PHASE MODELS ARE PROTECTED UNDER PRIMARY SINGLE PHASE CONDITIONS.
- CONNECTIONS FOR ALTERNATE VOLTAGES, IF REQUIRED, REQUIRED.

WIRING INFORMATION

- LINE VOLTAGE
- FACTORY STANDARD
- FACTORY OPTION
- FIELD INSTALLED
- LOW VOLTAGE
- FACTORY STANDARD
- FACTORY OPTION
- FIELD INSTALLED
- REPLACEMENT WIRE SIZE AND TYPE
- WARNING: CABINET MUST BE PERMANENTLY GROUNDED AND CONFORM TO I.E.C. N.E.C. C.E.C. AND ALL APPLICABLE REGULATIONS, AND LOCAL CODES AS APPLICABLE.

TRANSFORMER TERN

| VOLTAGE | TERNS |
|-----------------|-------|
| 200-220-50/60HZ | 200 |
| 208-60/60HZ | 230 |
| 230-60/60HZ | 230 |
| 380-415-50/60HZ | 400 |
| 480-60/60HZ | 460 |
| 575-60/60HZ | 230 |

In keeping with its policy of continuous progress and product improvement, Rheem reserves the right to make changes without notice.