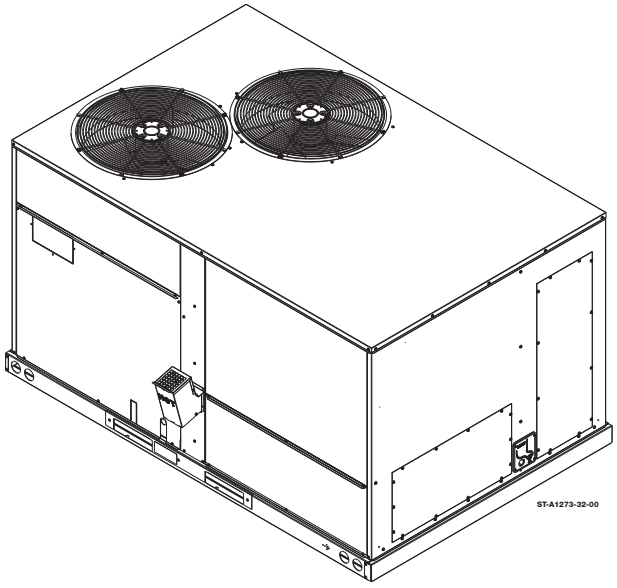
# INSTALLATION INSTRUCTIONS

## 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




**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.

BA001-08

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

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

R-410A

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

c UL us LISTED

Accredited by the RvA
ANAB ACCREDITED
ISO 9001:2015
Certificate Number: 30164

**92-106166-01-04**
SUPERSEDES 92-106166-01-03

**⚠ NOTICE**

### BREAK-IN PERIOD

**PRIOR TO AGENCY TESTING, RUN THE COMPRESSOR FOR 16 HOURS AT 115ºF OUTDOOR AMBIENT TEMPERATURE AND 80º DRY BULB/75º 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.

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

**<u>Pressure: The pressure of R-410A is approximately 60% (1.6 times) greater than R-22.</u>** Recovery and recycle equipment, pumps, hoses, and the like need to have design pressure ratings appropriate for R-410A. *Manifold sets need to range up*

*to 800 psig high-side and 250 psig low-side with a 550 psig low-side retard. Hoses need to have a service pressure rating of 800 psig. Recovery cylinders need to have a 400 psig service pressure rating.* DOT 4BA400 or DOT BW400.

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

**2. Quick Reference Guide For R-410A**

- R-410A refrigerant operates at approximately 60% higher pressure (1.6 times) than R-22. Ensure that servicing equipment is designed to operate with R-410A.
- R-410A refrigerant cylinders are pink.
- R-410A, as with other HFC's is only compatible with POE oils.
- Vacuum pumps will not remove moisture from POE oil.
- R-410A systems are to be charged with liquid refrigerants. Prior to March 1999, R-410A refrigerant cylinders had a dip tube. These cylinders should be kept upright for equipment charging. Post March 1999 cylinders do not have a dip tube and should be inverted to ensure liquid charging of the equipment.
- Do not install a suction line filter drier in the liquid line.
- A liquid line filter drier is standard on every unit.
- Desiccant (drying agent) must be compatible for POE oils and R-410A.

**3. Evaporator Coil/ TXV**

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

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

Manifold Sets:
-Up to 800 PSIG High Side
-Up to 250 PSIG Low Side
-550 PSIG Low Side Retard

Manifold Hoses:
-Service Pressure Rating of 800 PSIG

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

**⚠ CAUTION**

R-410A SYSTEMS OPERATE AT HIGHER 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 COMMERCIALLY 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 1**
**FRONT VIEW**

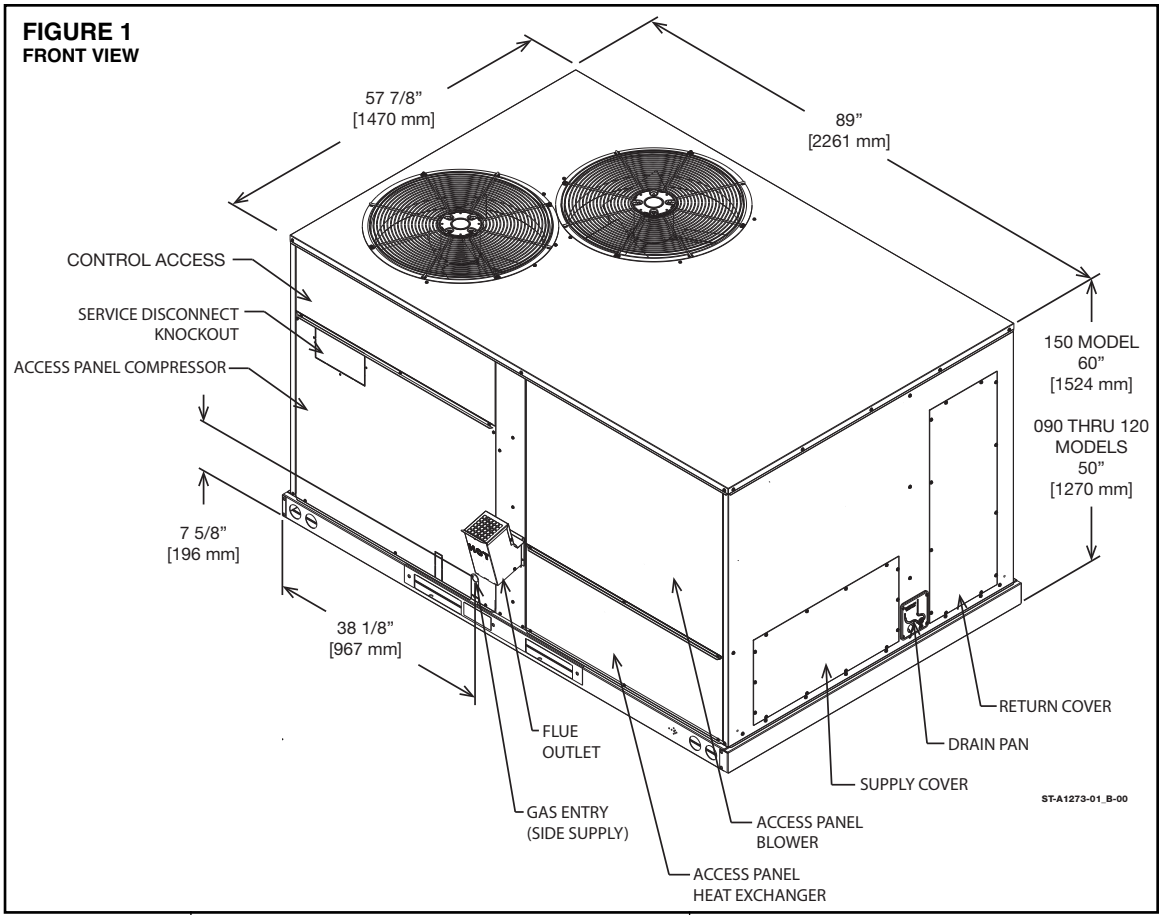



**FIGURE 2**
**REAR VIEW**

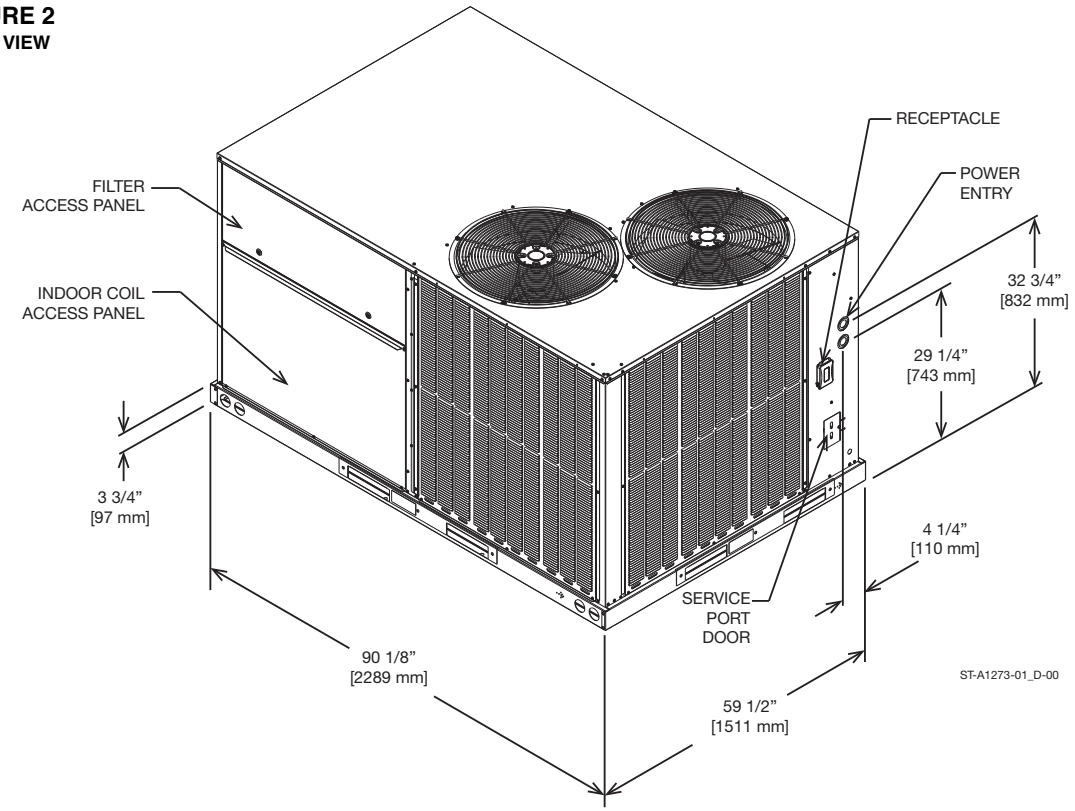


**FIGURE 3**
**SUPPLY AND RETURN DIMENSIONS FOR DOWNFLOW APPLICATIONS**

**(VIEW FROM BOTTOM LOOKING UP)**

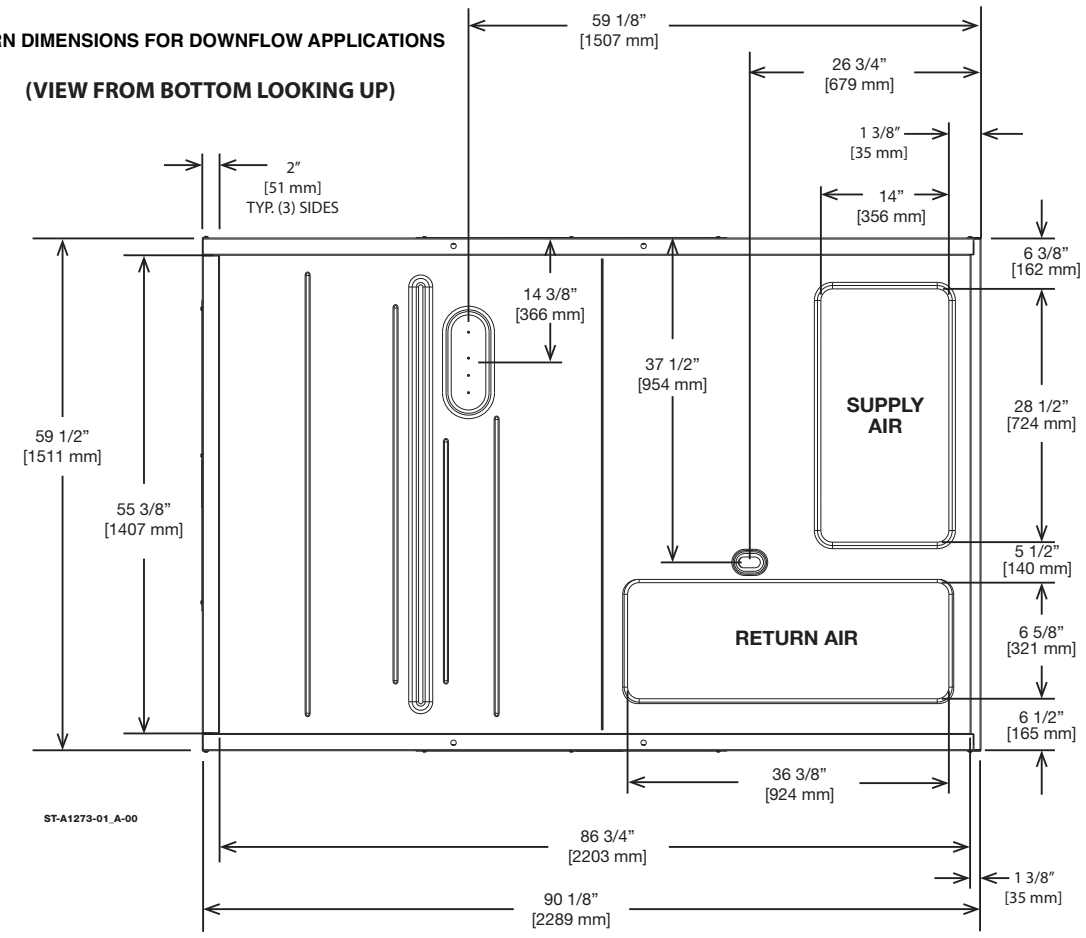



**FIGURE 4**
**SUPPLY AND RETURN DIMENSIONS FOR HORIZONTAL APPLICATIONS**

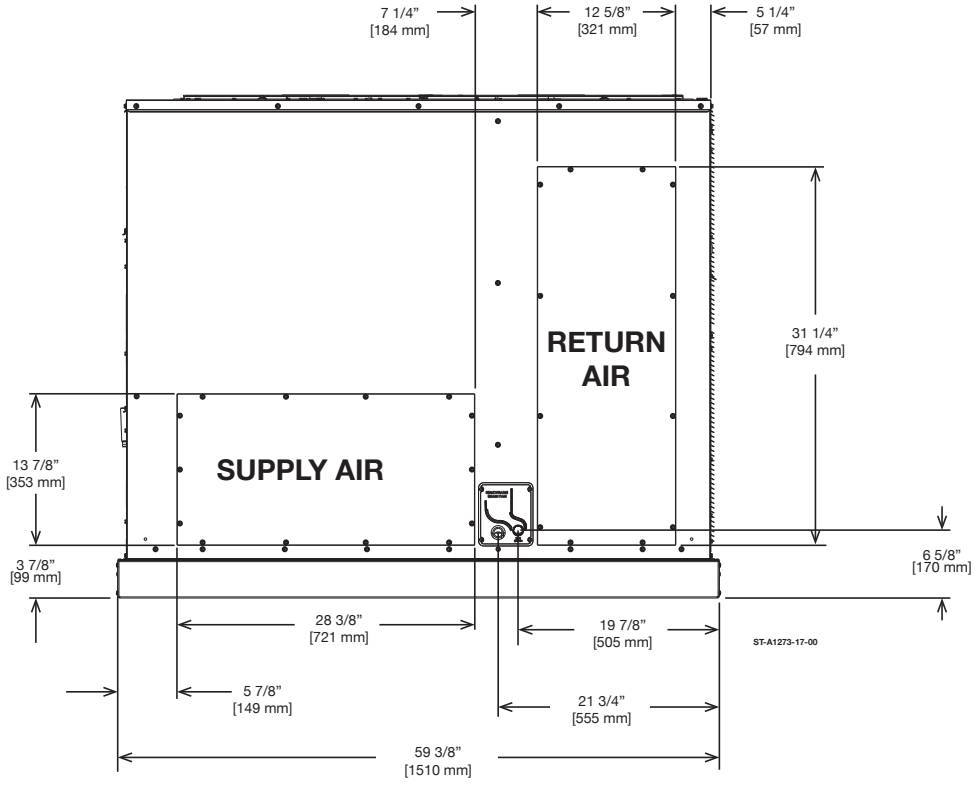
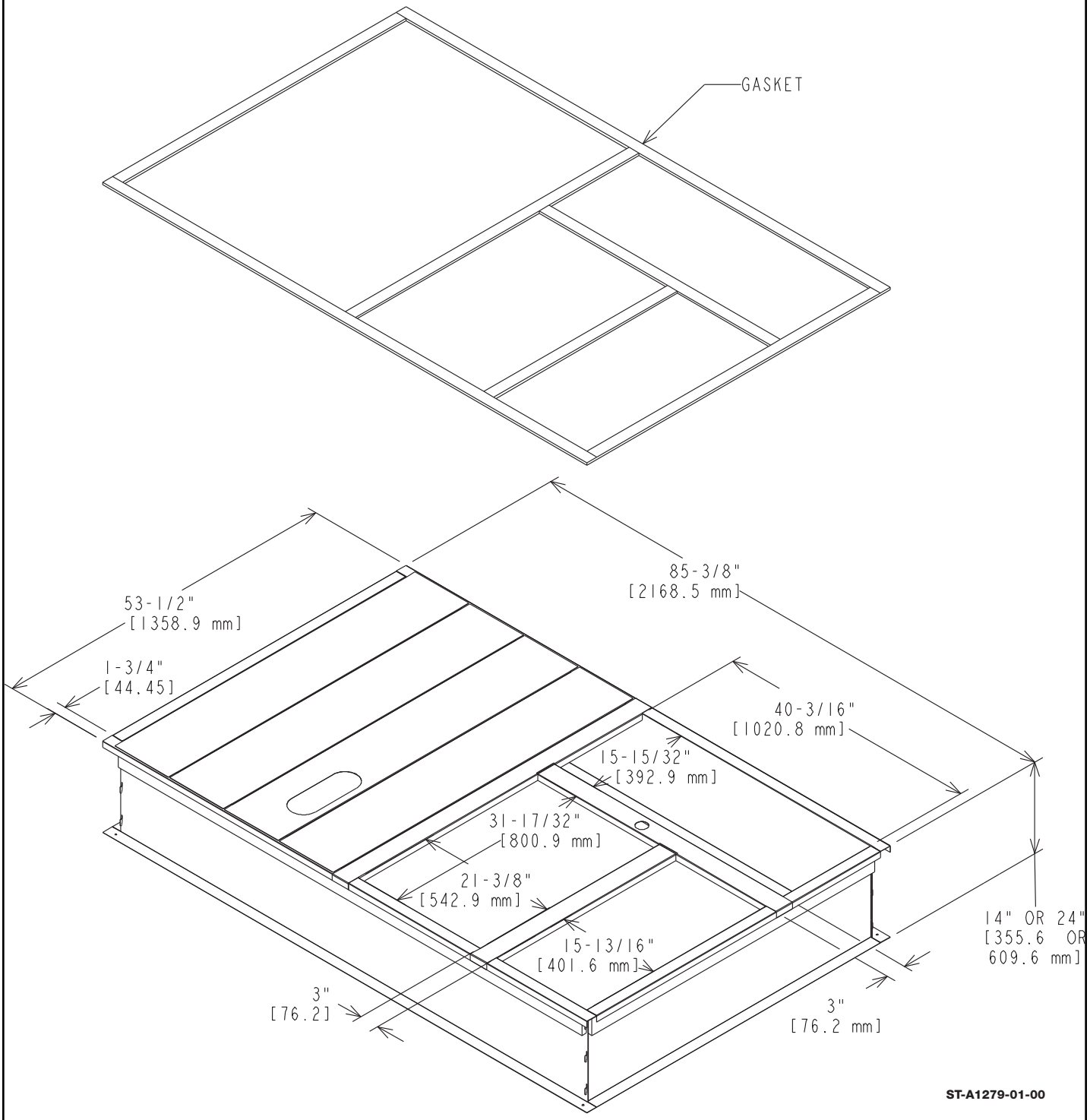


**FIGURE 5**
**ROOFCURB INSTALLATION**



# 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 Performance**[1] | | | |
| 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** | 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** | 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 |
| 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 |
| 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 |
| 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 Performance**[1] | | | | |
| 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** | Louvered | Louvered | Louvered | Louvered |
| Tube Type | MicroChannel | MicroChannel | MicroChannel | MicroChannel |
| MicroChannel Depth in. [mm] | 0.71 [18] | 0.81 [20.6] | 1 [25.4] | 1 [25.4] |
| Face Area sq. ft. [sq. m] | 25.4 [2.36] | 25.6 [2.38] | 25.6 [2.38] | 31.5 [2.93] |
| Rows / FPI [FPcm] | 1 / 23 [9] | 1 / 23 [9] | 1 / 23 [9] | 1 / 23 [9] |
| **Indoor Coil - Fin Type** | Louvered | Louvered | Louvered | Louvered |
| Tube Type | MicroChannel | MicroChannel | MicroChannel | MicroChannel |
| MicroChannel Depth in. [mm] | 1 [25.4] | 1.26 [32] | 1.26 [32] | 1 [25.4] |
| Face Area sq. ft. [sq. m] | 11 [1.02] | 10.9 [1.01] | 10.9 [1.01] | 13.8 [1.28] |
| Rows / FPI [FPcm] | 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 |
| 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 |
| 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 | 56 |
| **Filter - Type** | 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] |

# 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 Performance**[1] | | | | |
| 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** | Louvered | Louvered | Louvered | Louvered |
| Tube Type | MicroChannel | MicroChannel | MicroChannel | MicroChannel |
| MicroChannel Depth in. [mm] | 0.71 [18] | 0.81 [20.6] | 1 [25.4] | 1 [25.4] |
| Face Area sq. ft. [sq. m] | 25.4 [2.36] | 25.6 [2.38] | 25.6 [2.38] | 31.5 [2.93] |
| Rows / FPI [FPcm] | 1 / 23 [9] | 1 / 23 [9] | 1 / 23 [9] | 1 / 23 [9] |
| **Indoor Coil - Fin Type** | Louvered | Louvered | Louvered | Louvered |
| Tube Type | MicroChannel | MicroChannel | MicroChannel | MicroChannel |
| MicroChannel Depth in. [mm] | 1 [25.4] | 1.26 [32] | 1.26 [32] | 1 [25.4] |
| Face Area sq. ft. [sq. m] | 11 [1.02] | 10.9 [1.01] | 10.9 [1.01] | 13.8 [1.28] |
| Rows / FPI [FPcm] | 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 |
| 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 |
| 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 |
| 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<br><br>RGED** | Heating Input BTU [kW] (1st Stage / 2nd Stage) | Heating Output Btu [kW] (1st Stage / 2nd Stage) | Temperature Rise Range ˚F [˚C] (1st Stage / 2nd 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<br>090ACA20 | 090ACB15<br>090ACC15<br>090ACC20<br>090ACB20 | 090ADA15<br>090ADA20 | 090ADB15<br>090ADB20<br>090ADC15<br>090ADC20 | 090AYA15<br>090AYA20 | 090AYB15<br>090AYB20<br>090AYC15<br>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 | 164 | 164 | 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<br>102ACA22 | 102ACB15<br>102ACB22<br>102ACC15<br>102ACC22 | 102ADA15<br>102ADA22 | 102ADB15<br>102ADB22 | 102ADC15<br>102ADC22 | 102AYA15<br>102AYA22 | 102AYB15<br>102AYB22<br>102AYC15<br>102AYC22 |
| Unit Information | Unit Operating Voltage Range | 187-253 | 187-253 | 414-506 | 414-506 | 414-506 | 517-633 | 517-633 |
| | Volts | 208/230 | 208/230 | 460 | 460 | 460 | 575 | 575 |
| | Phase | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | Hz | 60 | 60 | 60 | 60 | 60 | 60 | 60 |
| | Minimum Circuit Ampacity | 44 | 46 | 22 | 23 | 24 | 16 | 17 |
| | Minimum Overcurrent Protection Device Size | 60 | 60 | 25 | 30 | 30 | 20 | 20 |
| | Maximum Overcurrent Protection Device Size | 70 | 70 | 30 | 35 | 35 | 25 | 25 |
| Compressor Motor | No. | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | Volts | 208/230 | 208/230 | 460 | 460 | 460 | 575 | 575 |
| | Phase | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | RPM | 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 |
| | Amps (RLA), Comp. 1 | 27.6 | 27.6 | 12.8 | 12.8 | 12.8 | 9.6 | 9.6 |
| | Amps (LRA), Comp. 1 | 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 |
| | Volts | 208/230 | 208/230 | 460 | 460 | 460 | 575 | 575 |
| | Phase | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | HP | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 |
| | Amps (FLA, each) | 1.2 | 1.2 | 0.8 | 0.8 | 0.8 | 0.6 | 0.6 |
| | Amps (LRA, each) | 2.3 | 2.3 | 1.4 | 1.4 | 1.4 | 1.1 | 1.1 |
| Evaporator Fan | No. | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | Volts | 208/230 | 208/230 | 460 | 460 | 460 | 575 | 575 |
| | Phase | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | HP | 2 | 3 | 2 | 3 | 3 | 2 | 3 |
| | Amps (FLA, each) | 7.1 | 9.1 | 3.5 | 4.6 | 6 | 2.5 | 3.5 |
| | Amps (LRA, each) | 45 | 74.5 | 22.5 | 38.1 | 38.1 | 19 | 20 |

# ELECTRICAL DATA - GEDZR MODELS

| ELECTRICAL DATA - -GEDZR SERIES | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 120ACA15<br>120ACA22 | 120ACB15<br>120ACB22 | 120ACC15<br>120ACC22 | 120ADA15<br>120ADA22 | 120ADB15<br>120ADB22 | 120ADC15<br>120ADC22 | 120AYA15<br>120AYA22 | 120AYB15<br>120AYB22<br>120AYC15<br>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<br>090ACA20 | 090ACB15<br>090ACB20<br>090ACC15<br>090ACC20 | 090ACF15<br>090ACF20 | 090ACG15<br>090ACG20<br>090ACH15<br>090ACH20 | 090ADA15<br>090ADF15<br>090ADF20<br>090ADA20 | 090ADB15<br>090ADB20<br>090ADC15<br>090ADC20<br>090ADG15<br>090ADG20<br>090ADH15 |
| 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<br>102ACF15<br>102ACF22<br>102ACA22 | 102ACB15<br>102ACB22<br>102ACG15<br>102ACG22 | 102ACC15<br>102ACC22<br>102ACH15<br>102ACH22 | 102ADA15<br>102ADA22<br>102ADF15<br>102ADF22 | 102ADB15<br>102ADB22<br>102ADG15<br>102ADG22 | 102ADC15<br>102ADC22<br>102ADH15<br>102ADH22<br>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<br>120ACA22<br>120ACF15<br>120ACF22 | 120ACB15<br>120ACB22<br>120ACG15<br>120ACG22 | 120ACC15<br>120ACC22<br>120ACH15<br>120ACH22 | 120ADA15<br>120ADA22<br>120ADF15<br>120ADF22 | 120ADB15<br>120ADB22<br>120ADG15<br>120ADG22 | 120ADC15<br>120ADC22<br>120ADH15<br>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 | 32 | 34 |
| | Minimum Overcurrent Protection Device Size | 70 | 70 | 70 | 30 | 40 | 40 |
| | Maximum Overcurrent Protection Device Size | 80 | 80 | 90 | 40 | 45 | 45 |
| 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<br>150ACA22<br>150ACF15<br>150ACF22 | 150ACB15<br>150ACB22<br>150ACG15<br>150ACG22 | 150ADA15<br>150ADA22<br>150ADF15<br>150ADF22 | 150ADB15<br>150ADB22<br>150ADG15<br>150ADG22 | 150AYA15<br>150AYA22 | 150AYB15<br>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 | 25 | 25 | 12.8 | 12.8 | 9.6 | 9.6 |
| | Amps (LRA), Comp. 1 | 164 | 164 | 100 | 100 | 78 | 78 |
| | HP, Compressor 2 | 6 | 6 | 6 | 6 | 6 | 6 |
| | Amps (RLA), Comp. 2 | 25 | 25 | 12.8 | 12.8 | 9.6 | 9.6 |
| | 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 | 1.2 | 1.2 |
| | 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<br>090ACF20 | 090ACG15<br>090ACG20<br>090ACH15<br>090ACH20 | 090ADF15<br>090ADF20 | 090ADG15<br>090ADG20<br>090ADH15<br>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<br>102ACF22 | 102ACG15<br>102ACG22 | 102ACH15<br>102ACH22 | 102ADF15<br>102ADF22 | 102ADG15<br>102ADG22 | 102ADH15<br>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<br>120ACF22 | 120ACG15<br>120ACG22 | 120ACH15<br>120ACH22 | 120ADF15<br>120ADF22 | 120ADG15<br>120ADG22 | 120ADH15<br>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 | 32 | 34 |
| | Minimum Overcurrent Protection Device Size | 70 | 70 | 70 | 30 | 40 | 40 |
| | Maximum Overcurrent Protection Device Size | 80 | 80 | 90 | 40 | 45 | 45 |
| 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<br>150ACF22 | 150ACG15<br>150ACG22 | 150ADF22<br>150ACG22 | 150ADG15<br>150ADG22 |
| Unit Infomation | 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 | 50 | 56 | 26 | 29 |
| | Minimum Overcurrent Protection Device Size | 60 | 70 | 35 | 35 |
| | Maximum Overcurrent Protection Device Size | 70 | 80 | 35 | 40 |
| 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 | 25 | 25 | 12.8 | 12.8 |
| | Amps (LRA), Comp. 1 | 164 | 164 | 100 | 100 |
| | HP, Compressor 2 | 6 | 6 | 6 | 6 |
| | Amps (RLA), Comp. 2 | 25 | 25 | 12.8 | 12.8 |
| | 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 CHECK-POINTS — 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.**

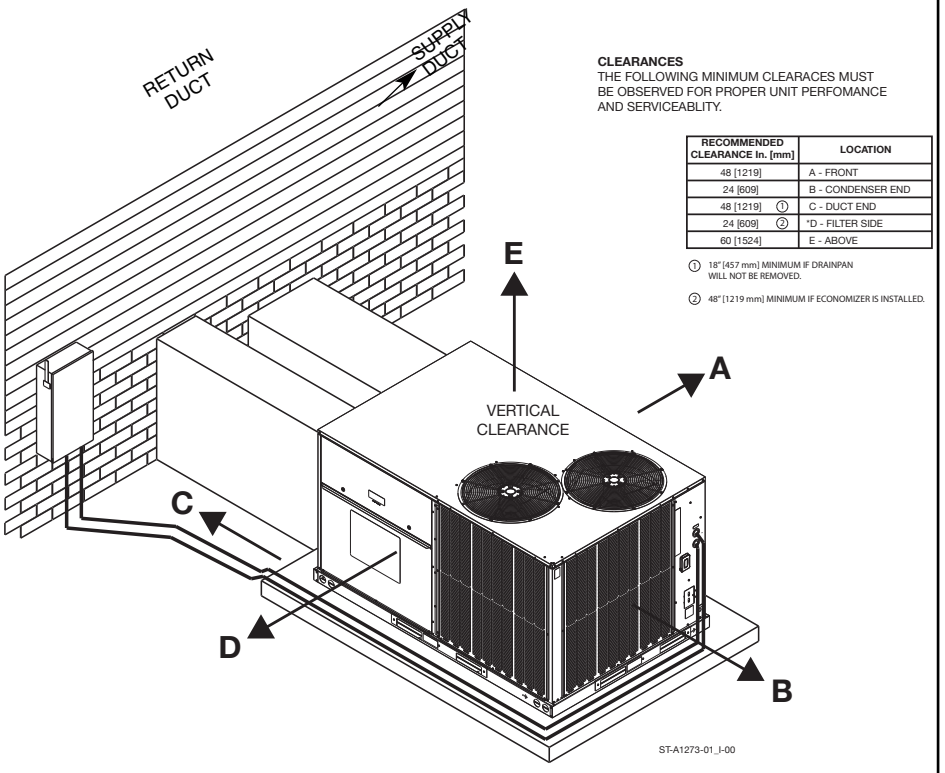
## B. OUTSIDE INSTALLATION

**⚠ 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 9**
**FILTER REPLACEMENT**

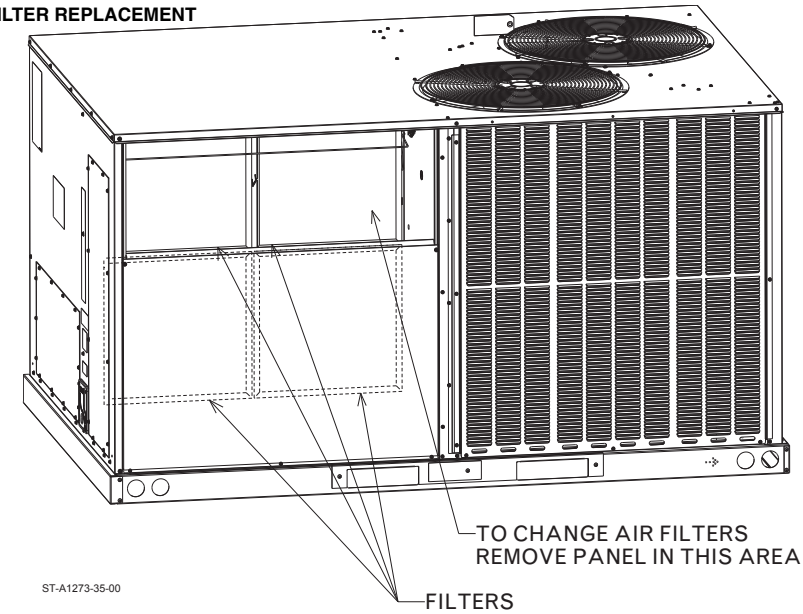



**FIGURE 8**
**COVER GASKET DETAIL FOR UNITS SHIPPED FOR DOWNFLOW APPLICATION BEING CONVERTED TO HORIZONTAL**

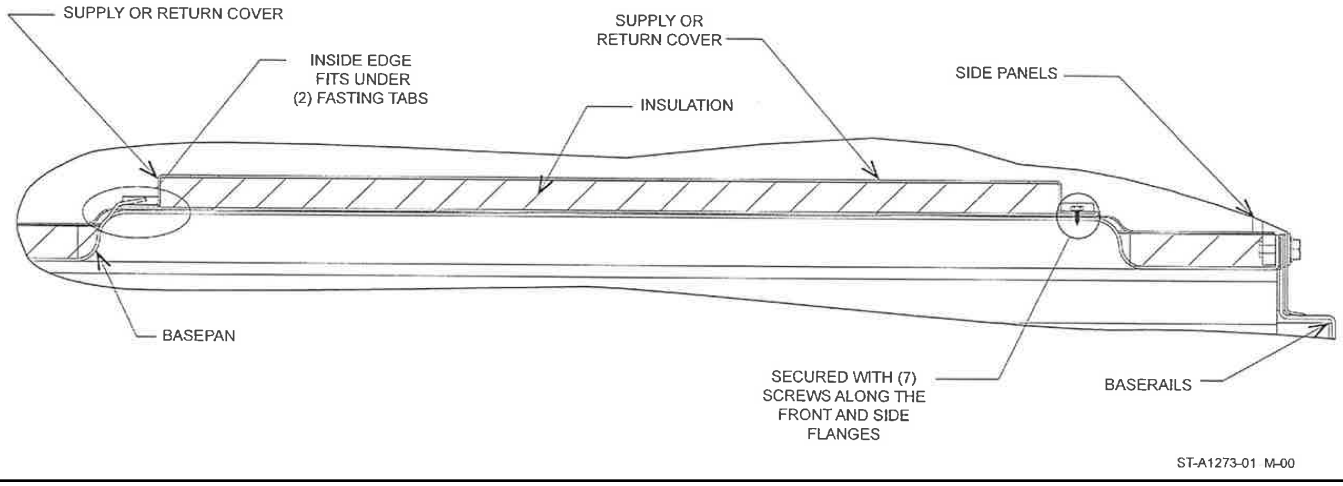
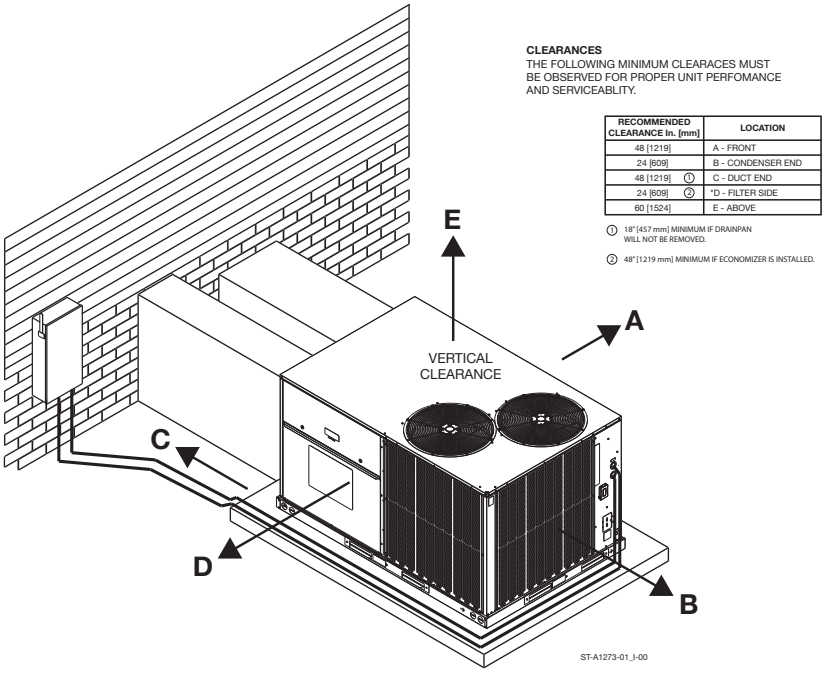


**FIGURE 10**
**FLAT ROOFTOP INSTALLATION, ATTIC OR DROP CEILING DISTRIBUTING SYSTEM. MOUNTED ON ROOFCURB. CURB MUST BE LEVEL.**




# 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 11**
**LIFTING DETAIL**

| CAPACITY TONS [kW] | CORNER WEIGHTS BY PERCENTAGE | | | |
|---|---|---|---|---|
| | A | B | C | D |
| 7.5-12.5 [21.1-44.0] | 26% | 34% | 17% | 23% |

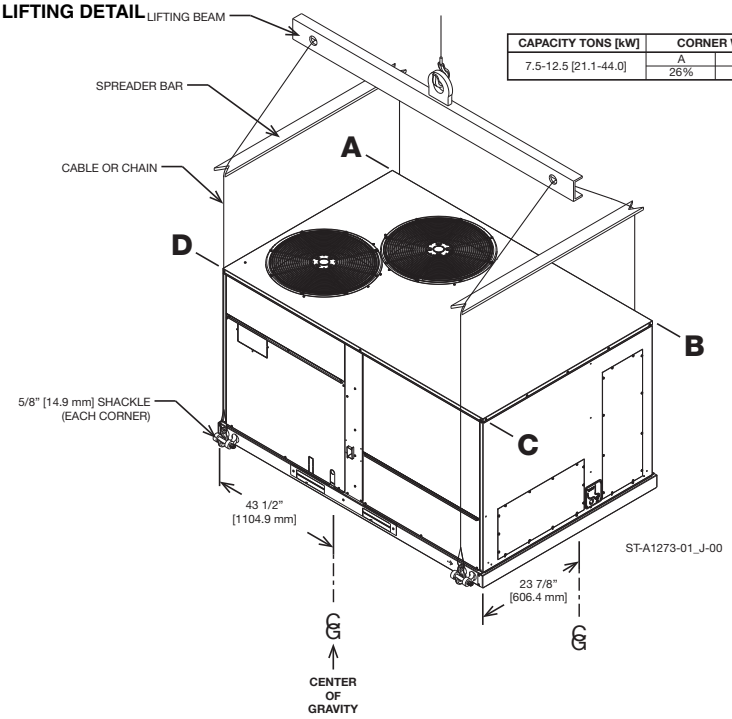



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**FIGURE 12**
**ROOFCURB**

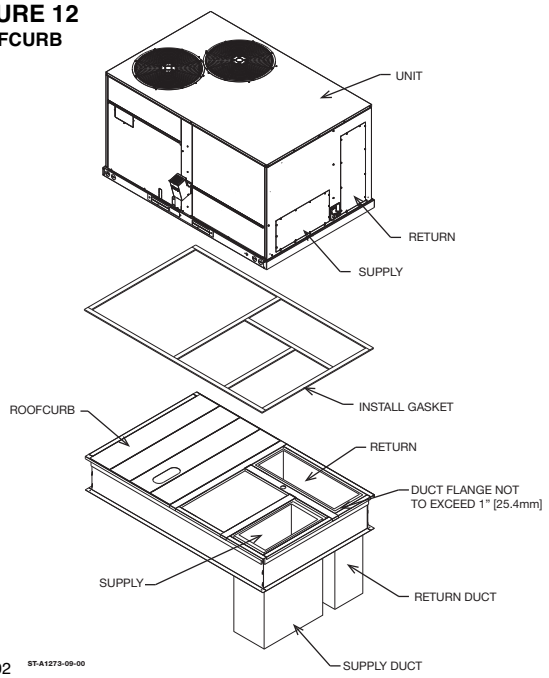


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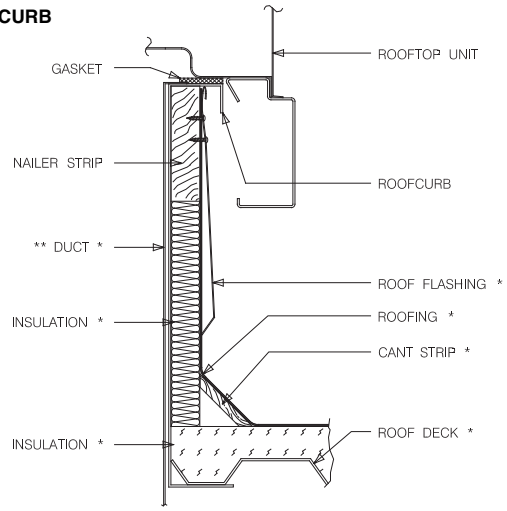
**FIGURE 13**
**ROOFCURB**




* 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.**

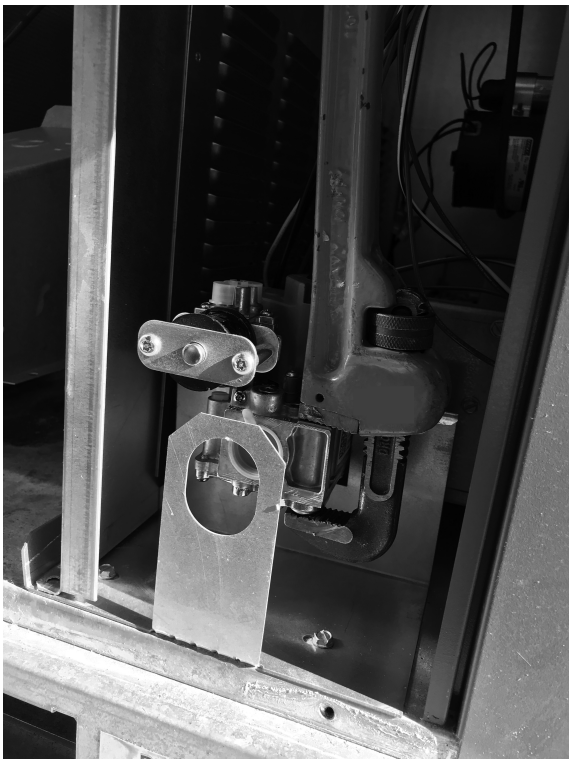
**⚠ WARNING**

**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/FT$^3$) 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 |
| ½ | 132 | 92 | 73 | 63 | 56 | 50 | 46 | 43 |
| ¾ | 278 | 190 | 152 | 130 | 115 | 105 | 96 | 90 |
| 1 | 520 | 350 | 285 | 245 | 215 | 195 | 180 | 170 |
| 1¼ | 1,050 | 730 | 590 | 500 | 440 | 400 | 370 | 350 |
| 1½ | 1,600 | 1,100 | 890 | 760 | 670 | 610 | 560 | 530 |

**FIGURE 14C**
**SUGGESTED GAS PIPING**

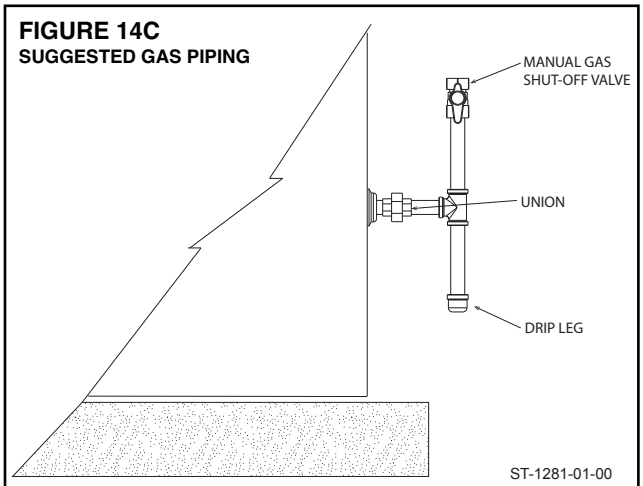



**TABLE 2**
**LP GAS PIPE CAPACITY TABLE (CU. FT./HR.)**

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 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Natural Gas (cu. Ft.) | | | | | | | | LP (cu. Ft.) | |
| | Meter Size | 900 | | 1000 | | 1050 | | 1100 | | 2500 | |
| Input BTU/HR | Cu. Ft. | 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 |

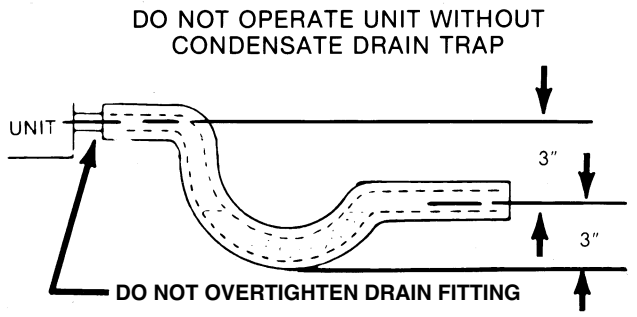
$$\text{Cu. Ft. Per Hr. Required} = \frac{\text{Heating Value of Gas (BTU/Cu. Ft.) x 3600}}{\text{Time in Seconds (for 1 Cu. Ft.) of Gas}}$$

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).**

**FIGURE 15**
**CONDENSATE DRAIN**




## 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 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**

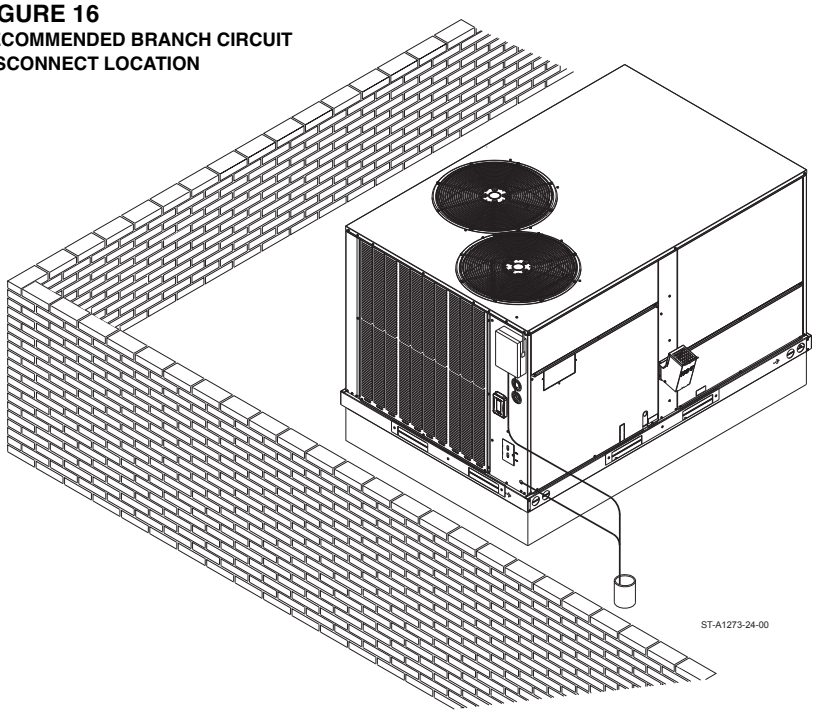


**FIGURE 17**

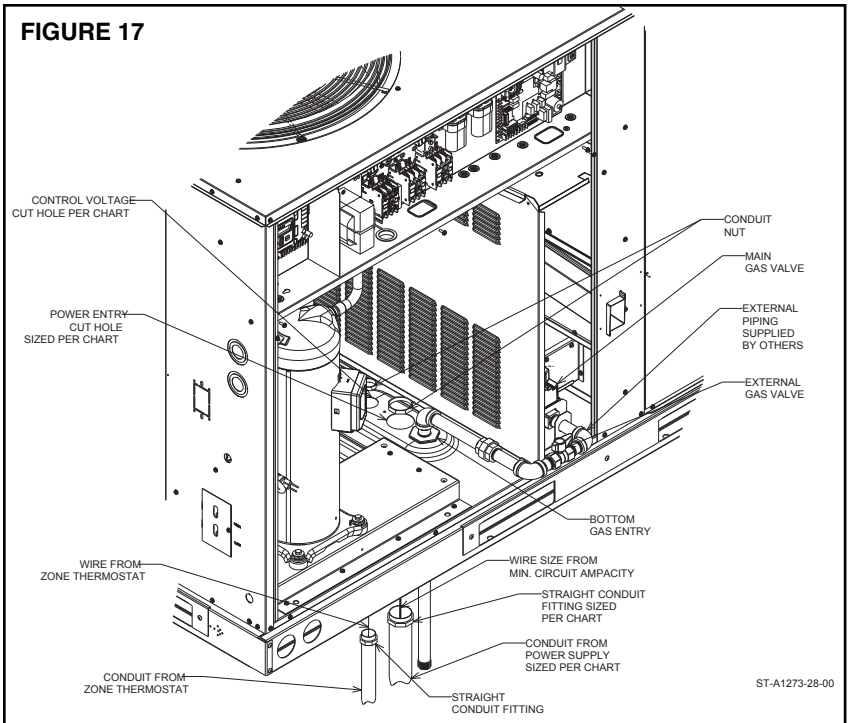
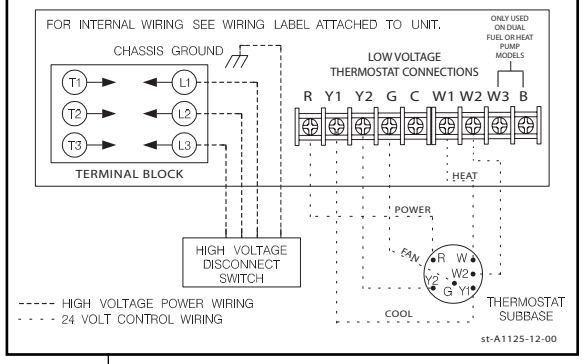



**FIGURE 18**
**TYPICAL THERMOSTAT WIRING**




| | 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 | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | SOLID COPPER WIRE - AWG. | | | | | |
| Thermostat Load - Amps | 3.0 | 16 | 14 | 12 | 10 | 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 senses 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 energzes indoo 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 were all inputs are continuously checked.
5. Zone thermostat is satisfied.
6. Control de-energizes indoor blower relay after 80 second indoor blowerl 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 — 7.5 TON [26.4kW] — 60 Hz — DOWNFLOW

| Air Flow CFM [L/s] | Model RGEDZ*090* Voltage 208/230, 460, 575 — 3 phase 60 Hz | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | External Static Pressure — Inches of Water [kPa] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0.1 [.02] | | 0.2 [.05] | | 0.3 [.07] | | 0.4 [.10] | | 0.5 [.12] | | 0.6 [.15] | | 0.7 [.17] | | 0.8 [.20] | | 0.9 [.22] | | 1.0 [.25] | | 1.1 [.27] | | 1.2 [.30] | | 1.3 [.32] | | 1.4 [.35] | | 1.5 [.37] | | 1.6 [.40] | | 1.7 [.42] | | 1.8 [.45] | | 1.9 [.47] | | 2.0 [.50] | |
| | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W |
| 2400 [1133] | — | — | 551 | 782 | 585 | 814 | 619 | 848 | 652 | 885 | 684 | 926 | 717 | 969 | 748 | 1016 | 780 | 1065 | 810 | 1118 | 841 | 1174 | 870 | 1233 | 900 | 1294 | 929 | 1359 | 957 | 1427 | 985 | 1498 | 1012 | 1572 | 1039 | 1649 | 1065 | 1729 | 1091 | 1813 |
| 2500 [1180] | — | — | 562 | 816 | 596 | 848 | 629 | 884 | 661 | 923 | 693 | 964 | 725 | 1009 | 756 | 1057 | 787 | 1108 | 817 | 1162 | 846 | 1219 | 876 | 1279 | 904 | 1343 | 933 | 1409 | 960 | 1478 | 987 | 1550 | 1014 | 1626 | 1040 | 1704 | 1066 | 1786 | 1092 | 1870 |
| 2600 [1227] | — | — | 574 | 851 | 607 | 885 | 639 | 922 | 671 | 962 | 702 | 1006 | 733 | 1052 | 764 | 1101 | 794 | 1153 | 823 | 1209 | 852 | 1267 | 881 | 1329 | 909 | 1393 | 937 | 1461 | 964 | 1531 | 990 | 1605 | 1016 | 1682 | 1042 | 1762 | 1067 | 1844 | 1092 | 1930 |
| 2700 [1274] | 553 | 857 | 585 | 889 | 618 | 925 | 650 | 963 | 681 | 1004 | 712 | 1049 | 742 | 1096 | 772 | 1147 | 801 | 1201 | 830 | 1258 | 858 | 1317 | 886 | 1380 | 914 | 1446 | 941 | 1515 | 967 | 1587 | 993 | 1662 | 1019 | 1740 | 1044 | 1821 | 1068 | 1905 | 1092 | 1993 |
| 2800 [1321] | 565 | 896 | 597 | 930 | 629 | 966 | 660 | 1006 | 691 | 1049 | 721 | 1095 | 751 | 1144 | 780 | 1196 | 808 | 1251 | 837 | 1309 | 864 | 1370 | 892 | 1434 | 919 | 1501 | 945 | 1572 | 971 | 1645 | 996 | 1721 | 1021 | 1801 | 1045 | 1883 | 1069 | 1969 | 1093 | 2057 |
| 2900 [1368] | 577 | 937 | 609 | 972 | 640 | 1010 | 670 | 1051 | 701 | 1096 | 730 | 1143 | 759 | 1193 | 788 | 1246 | 816 | 1303 | 843 | 1362 | 871 | 1425 | 897 | 1490 | 923 | 1559 | 949 | 1630 | 974 | 1705 | 999 | 1783 | 1023 | 1864 | 1047 | 1948 | 1070 | 2035 | 1093 | 2124 |
| 3000 [1416] | 590 | 981 | 621 | 1017 | 651 | 1057 | 681 | 1099 | 710 | 1145 | 739 | 1193 | 768 | 1245 | 796 | 1300 | 823 | 1357 | 850 | 1418 | 877 | 1482 | 903 | 1549 | 928 | 1619 | 953 | 1692 | 978 | 1768 | 1002 | 1847 | 1026 | 1929 | 1049 | 2014 | 1072 | 2103 | 1094 | 2194 |
| 3100 [1463] | 602 | 1027 | 633 | 1065 | 662 | 1105 | 692 | 1149 | 720 | 1196 | 749 | 1246 | 777 | 1299 | 804 | 1355 | 831 | 1414 | 857 | 1476 | 883 | 1541 | 908 | 1610 | 933 | 1681 | 958 | 1755 | 982 | 1833 | 1005 | 1913 | 1028 | 1997 | 1051 | 2083 | 1073 | 2173 | 1094 | 2266 |
| 3200 [1510] | 615 | 1075 | 645 | 1114 | 674 | 1157 | 702 | 1202 | 731 | 1250 | 758 | 1301 | 785 | 1356 | 812 | 1413 | 838 | 1473 | 864 | 1537 | 889 | 1603 | 914 | 1673 | 938 | 1746 | 962 | 1821 | 986 | 1900 | 1008 | 1982 | 1031 | 2067 | 1053 | 2155 | 1074 | 2246 | 1095 | 2340 |
| 3300 [1557] | 628 | 1126 | 657 | 1166 | 685 | 1210 | 713 | 1256 | 741 | 1306 | 768 | 1359 | 794 | 1414 | 820 | 1473 | 846 | 1535 | 871 | 1600 | 896 | 1668 | 920 | 1739 | 944 | 1813 | 967 | 1890 | 989 | 1970 | 1012 | 2053 | 1033 | 2139 | 1055 | 2229 | 1075 | 2321 | 1096 | 2416 |
| 3400 [1604] | 640 | 1179 | 669 | 1221 | 697 | 1266 | 724 | 1314 | 751 | 1365 | 777 | 1419 | 803 | 1476 | 829 | 1536 | 854 | 1599 | 878 | 1665 | 902 | 1734 | 926 | 1807 | 949 | 1882 | 971 | 1960 | 993 | 2042 | 1015 | 2126 | 1036 | 2214 | 1057 | 2305 | 1077 | 2398 | 1097 | 2495 |
| 3500 [1652] | 653 | 1235 | 681 | 1278 | 708 | 1324 | 735 | 1373 | 761 | 1425 | 787 | 1481 | 812 | 1539 | 837 | 1601 | 861 | 1665 | 885 | 1733 | 909 | 1803 | 932 | 1877 | 954 | 1954 | 976 | 2034 | 997 | 2116 | 1018 | 2202 | 1039 | 2291 | 1059 | 2383 | 1078 | 2478 | 1097 | 2576 |
| 3600 [1699] | 666 | 1292 | 693 | 1337 | 720 | 1384 | 746 | 1435 | 771 | 1489 | 797 | 1545 | 821 | 1605 | 845 | 1668 | 869 | 1734 | 892 | 1803 | 915 | 1875 | 938 | 1950 | 959 | 2028 | 981 | 2109 | 1001 | 2193 | 1022 | 2280 | 1042 | 2371 | 1061 | 2464 | 1080 | 2560 | 1098 | 2660 |

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 | AK84H | | | | | | AK84H | | | | | | AK84H | | | | | |
| Motor Sheave | 1VL40*7/8 | | | | | | 1VP50*7/8 | | | | | | 1VP56*7/8 | | | | | |
| Belt | A49 | | | | | | A50 | | | | | | A51 | | | | | |
| Turns Open | 0 | 1 | **2** | 3 | 4 | 5 | 0 | 1 | 2 | 3 | 4 | **5** | 0 | 1 | 2 | 3 | 4 | **5** |
| RPM | 767 | 721 | **678** | 635 | 590 | 548 | 992 | 949 | 908 | 866 | 823 | **782** | 1108 | 1067 | 1029 | 987 | 946 | **905** |

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 | AIRFLOW CORRECTION FACTORS * | | | COMPONENT AIRFLOW RESISTANCE | | | |
|---|---|---|---|---|---|---|---|
| | | | | Wet Coil | Vertical Economizer RA Damper Open | Concentric Diffuser RXRN-AEF2000 & Concentric Adapter RXMC-DD01 (Flush) | Concentric Diffuser RXRN-AED2000 & Concentric Adapter RXMC-DD01 (Drop) |
| CFM [L/s] | Total MBH | Sensible MBH | Power kW | Resistance — Inches of Water [kPa] | | | |
| 2400 [1133] | 0.96 | 0.89 | 0.98 | 0.04 [.01] | 0.01 [.00] | 0.66 [.16] | 0.53 [.13] |
| 2500 [1180] | 0.96 | 0.90 | 0.99 | 0.05 [.01] | 0.02 [.00] | 0.71 [.18] | 0.57 [.14] |
| 2600 [1227] | 0.97 | 0.92 | 0.99 | 0.05 [.01] | 0.02 [.01] | 0.75 [.19] | 0.60 [.15] |
| 2700 [1274] | 0.97 | 0.93 | 0.99 | 0.05 [.01] | 0.03 [.01] | 0.80 [.20] | 0.65 [.16] |
| 2800 [1321] | 0.98 | 0.95 | 0.99 | 0.06 [.01] | 0.04 [.01] | 0.85 [.21] | 0.69 [.17] |
| 2900 [1368] | 0.98 | 0.96 | 1.00 | 0.06 [.02] | 0.04 [.01] | 0.91 [.23] | 0.74 [.18] |
| 3000 [1416] | 0.99 | 0.97 | 1.00 | 0.07 [.02] | 0.05 [.01] | 0.96 [.24] | 0.79 [.20] |
| 3100 [1463] | 1.00 | 0.99 | 1.00 | 0.07 [.02] | 0.06 [.02] | 1.02 [.25] | 0.86 [.21] |
| 3200 [1510] | 1.00 | 1.00 | 1.01 | 0.07 [.02] | 0.07 [.02] | 1.08 [.27] | 0.92 [.23] |
| 3300 [1557] | 1.01 | 1.02 | 1.01 | 0.08 [.02] | 0.08 [.02] | 1.15 [.29] | 0.99 [.25] |
| 3400 [1604] | 1.01 | 1.03 | 1.01 | 0.08 [.02] | 0.09 [.02] | 1.21 [.30] | 1.05 [.26] |
| 3500 [1652] | 1.02 | 1.05 | 1.01 | 0.09 [.02] | 0.10 [.02] | 1.29 [.32] | 1.09 [.27] |
| 3600 [1699] | 1.02 | 1.06 | 1.02 | 0.09 [.02] | 0.11 [.03] | 1.36 [.34] | 1.13 [.28] |

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

[ ] Designates Metric Conversions

# AIRFLOW PERFORMANCE — 7.5 TON [26.4kW] — 60 Hz — SIDEFLOW

| Air Flow CFM [L/s] | Model RGEDZ*090* Voltage 208/230, 460, 575 — 3 phase 60 Hz | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 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 | RPM | W |
| 2400 [1133] | — | — | — | — | 558 | 822 | 594 | 853 | 629 | 887 | 663 | 925 | 697 | 965 | 730 | 1009 | 763 | 1056 | 794 | 1106 | 826 | 1159 | 856 | 1216 | 886 | 1275 | 915 | 1338 | 943 | 1404 | 971 | 1474 | 998 | 1546 | 1025 | 1622 | 1051 | 1700 | 1076 | 1782 |
| 2500 [1180] | — | — | — | — | 568 | 848 | 604 | 881 | 638 | 917 | 672 | 956 | 705 | 998 | 738 | 1044 | 769 | 1092 | 801 | 1144 | 831 | 1199 | 861 | 1258 | 890 | 1319 | 919 | 1384 | 947 | 1452 | 974 | 1523 | 1001 | 1597 | 1027 | 1674 | 1052 | 1755 | 1077 | 1838 |
| 2600 [1227] | — | — | 543 | 846 | 579 | 877 | 613 | 912 | 647 | 950 | 681 | 991 | 713 | 1035 | 745 | 1082 | 777 | 1132 | 807 | 1186 | 837 | 1243 | 867 | 1303 | 895 | 1366 | 923 | 1433 | 951 | 1502 | 978 | 1575 | 1004 | 1651 | 1029 | 1730 | 1054 | 1812 | 1078 | 1898 |
| 2700 [1274] | — | — | 554 | 877 | 589 | 910 | 623 | 946 | 657 | 986 | 689 | 1029 | 722 | 1074 | 753 | 1124 | 784 | 1176 | 814 | 1231 | 844 | 1290 | 872 | 1352 | 901 | 1417 | 928 | 1485 | 955 | 1556 | 981 | 1631 | 1007 | 1708 | 1032 | 1789 | 1056 | 1873 | 1079 | 1961 |
| 2800 [1321] | — | — | 566 | 911 | 600 | 946 | 634 | 984 | 666 | 1026 | 699 | 1070 | 730 | 1118 | 761 | 1169 | 792 | 1223 | 821 | 1280 | 850 | 1340 | 878 | 1404 | 906 | 1470 | 933 | 1540 | 959 | 1613 | 985 | 1690 | 1010 | 1769 | 1034 | 1852 | 1058 | 1938 | 1081 | 2027 |
| 2900 [1368] | 543 | 916 | 577 | 949 | 611 | 986 | 644 | 1026 | 676 | 1069 | 708 | 1115 | 739 | 1164 | 770 | 1217 | 799 | 1273 | 828 | 1332 | 857 | 1394 | 885 | 1459 | 912 | 1528 | 938 | 1599 | 964 | 1674 | 989 | 1752 | 1014 | 1833 | 1037 | 1918 | 1061 | 2005 | 1083 | 2096 |
| 3000 [1416] | 555 | 955 | 589 | 990 | 622 | 1029 | 655 | 1070 | 687 | 1115 | 718 | 1163 | 748 | 1214 | 778 | 1269 | 807 | 1326 | 836 | 1387 | 864 | 1451 | 891 | 1518 | 918 | 1588 | 944 | 1662 | 969 | 1738 | 994 | 1818 | 1017 | 1901 | 1041 | 1987 | 1063 | 2077 | 1085 | 2169 |
| 3100 [1463] | 568 | 998 | 601 | 1035 | 634 | 1075 | 666 | 1118 | 697 | 1165 | 728 | 1215 | 758 | 1268 | 787 | 1324 | 816 | 1383 | 844 | 1445 | 871 | 1511 | 898 | 1580 | 924 | 1652 | 949 | 1727 | 974 | 1806 | 998 | 1887 | 1022 | 1972 | 1044 | 2060 | 1066 | 2151 | 1088 | 2245 |
| 3200 [1510] | 581 | 1044 | 614 | 1083 | 646 | 1125 | 677 | 1170 | 708 | 1218 | 738 | 1270 | 768 | 1324 | 796 | 1382 | 824 | 1443 | 852 | 1507 | 879 | 1575 | 905 | 1646 | 931 | 1719 | 955 | 1796 | 980 | 1876 | 1003 | 1960 | 1026 | 2046 | 1048 | 2136 | 1070 | 2229 | 1091 | 2325 |
| 3300 [1557] | 594 | 1093 | 626 | 1134 | 658 | 1178 | 689 | 1225 | 719 | 1275 | 749 | 1328 | 778 | 1384 | 806 | 1444 | 833 | 1507 | 860 | 1573 | 887 | 1642 | 912 | 1714 | 937 | 1790 | 962 | 1869 | 985 | 1951 | 1008 | 2036 | 1031 | 2124 | 1052 | 2216 | 1073 | 2310 | 1094 | 2408 |
| 3400 [1604] | 607 | 1146 | 639 | 1189 | 670 | 1234 | 701 | 1283 | 730 | 1335 | 759 | 1390 | 788 | 1448 | 815 | 1509 | 843 | 1574 | 869 | 1642 | 895 | 1713 | 920 | 1787 | 944 | 1864 | 968 | 1945 | 991 | 2028 | 1014 | 2115 | 1036 | 2205 | 1057 | 2298 | 1077 | 2395 | 1097 | 2494 |
| 3500 [1652] | 621 | 1203 | 652 | 1247 | 683 | 1294 | 713 | 1344 | 742 | 1398 | 770 | 1455 | 798 | 1515 | 825 | 1578 | 852 | 1644 | 878 | 1714 | 903 | 1786 | 928 | 1862 | 952 | 1941 | 975 | 2024 | 997 | 2109 | 1019 | 2198 | 1041 | 2290 | 1061 | 2385 | 1081 | 2483 | 1101 | 2584 |
| 3600 [1699] | 635 | 1262 | 666 | 1308 | 696 | 1357 | 725 | 1409 | 754 | 1465 | 782 | 1523 | 809 | 1585 | 836 | 1650 | 862 | 1718 | 887 | 1789 | 912 | 1864 | 936 | 1941 | 959 | 2022 | 982 | 2106 | 1004 | 2194 | 1025 | 2284 | 1046 | 2378 | 1066 | 2474 | 1086 | 2574 | 1104 | 2677 |

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 | AK84H | | | | | | AK84H | | | | | | AK84H | | | | | |
| Motor Sheave | 1VL40*7/8 | | | | | | 1VP50*7/8 | | | | | | 1VP56*7/8 | | | | | |
| Belt | A49 | | | | | | A50 | | | | | | A51 | | | | | |
| Turns Open | 0 | 1 | **2** | 3 | 4 | 5 | 0 | 1 | 2 | 3 | 4 | **5** | 0 | 1 | 2 | 3 | 4 | **5** |
| RPM | 765 | 720 | **676** | 633 | 589 | 544 | 989 | 949 | 908 | 865 | 823 | **780** | 1108 | 1067 | 1029 | 987 | 946 | **905** |

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 horizontal airflow with dry coil. Add component resistance (below) to duct resistance to determine total External Static Pressure.

| Airflow | AIRFLOW CORRECTION FACTORS * | | | COMPONENT AIRFLOW RESISTANCE | | | |
|---|---|---|---|---|---|---|---|
| | | | | 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) |
| CFM [L/s] | Total MBH | Sensible MBH | Power kW | Resistance — Inches of Water [kPa] | | | |
| 2400 [1133] | 0.96 | 0.89 | 0.98 | 0.04 [.01] | 0.01 [.00] | 0.66 [.16] | 0.53 [.13] |
| 2500 [1180] | 0.96 | 0.90 | 0.99 | 0.05 [.01] | 0.02 [.00] | 0.71 [.18] | 0.57 [.14] |
| 2600 [1227] | 0.97 | 0.92 | 0.99 | 0.05 [.01] | 0.02 [.00] | 0.75 [.19] | 0.60 [.15] |
| 2700 [1274] | 0.97 | 0.93 | 0.99 | 0.05 [.01] | 0.03 [.01] | 0.80 [.20] | 0.65 [.16] |
| 2800 [1321] | 0.98 | 0.95 | 0.99 | 0.06 [.01] | 0.04 [.01] | 0.85 [.21] | 0.69 [.17] |
| 2900 [1368] | 0.98 | 0.96 | 1.00 | 0.06 [.02] | 0.04 [.01] | 0.91 [.23] | 0.74 [.18] |
| 3000 [1416] | 0.99 | 0.97 | 1.00 | 0.07 [.02] | 0.05 [.01] | 0.96 [.24] | 0.79 [.20] |
| 3100 [1463] | 1.00 | 0.99 | 1.00 | 0.07 [.02] | 0.06 [.01] | 1.02 [.25] | 0.86 [.21] |
| 3200 [1510] | 1.00 | 1.00 | 1.01 | 0.07 [.02] | 0.07 [.02] | 1.08 [.27] | 0.92 [.23] |
| 3300 [1557] | 1.01 | 1.02 | 1.01 | 0.08 [.02] | 0.08 [.02] | 1.15 [.29] | 0.99 [.25] |
| 3400 [1604] | 1.01 | 1.03 | 1.01 | 0.08 [.02] | 0.09 [.02] | 1.21 [.30] | 1.05 [.26] |
| 3500 [1652] | 1.02 | 1.05 | 1.01 | 0.09 [.02] | 0.10 [.02] | 1.29 [.32] | 1.09 [.27] |
| 3600 [1699] | 1.02 | 1.06 | 1.02 | 0.09 [.02] | 0.11 [.03] | 1.36 [.34] | 1.13 [.28] |

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

[ ] Designates Metric Conversions

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

| Air Flow CFM [L/s] | Model RGEDZ*102* Voltage 208/230, 460, 575 — 3 phase 60 Hz | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | External Static Pressure — Inches of Water [kPa] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0.1 [.02] | | 0.2 [.05] | | 0.3 [.07] | | 0.4 [.10] | | 0.5 [.12] | | 0.6 [.15] | | 0.7 [.17] | | 0.8 [.20] | | 0.9 [.22] | | 1.0 [.25] | | 1.1 [.27] | | 1.2 [.30] | | 1.3 [.32] | | 1.4 [.35] | | 1.5 [.37] | | 1.6 [.40] | | 1.7 [.42] | | 1.8 [.45] | | 1.9 [.47] | | 2.0 [.50] | |
| | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W |
| 2700 [1274] | — | — | 561 | 894 | 596 | 934 | 631 | 975 | 665 | 1018 | 698 | 1062 | 730 | 1108 | 762 | 1155 | 793 | 1203 | 823 | 1253 | 853 | 1304 | 882 | 1357 | 910 | 1411 | 937 | 1467 | 964 | 1524 | 990 | 1583 | 1015 | 1643 | 1039 | 1704 | 1063 | 1767 | 1086 | 1832 |
| 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 |
| 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 |
| 3000 [1416] | 564 | 959 | 599 | 1004 | 633 | 1051 | 666 | 1099 | 698 | 1149 | 730 | 1200 | 761 | 1253 | 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 |
| 3100 [1463] | 578 | 1001 | 612 | 1048 | 645 | 1098 | 678 | 1148 | 710 | 1200 | 741 | 1254 | 771 | 1308 | 801 | 1365 | 830 | 1423 | 858 | 1482 | 886 | 1542 | 912 | 1605 | 939 | 1668 | 964 | 1733 | 989 | 1800 | 1012 | 1868 | 1036 | 1937 | 1058 | 2008 | 1080 | 2080 | 1101 | 2154 |
| 3200 [1510] | 592 | 1046 | 625 | 1096 | 658 | 1148 | 690 | 1201 | 721 | 1255 | 752 | 1311 | 782 | 1368 | 811 | 1427 | 840 | 1487 | 867 | 1548 | 894 | 1611 | 921 | 1676 | 946 | 1742 | 971 | 1809 | 995 | 1878 | 1019 | 1948 | 1041 | 2020 | 1063 | 2093 | 1085 | 2168 | 1105 | 2244 |
| 3300 [1557] | 605 | 1096 | 638 | 1148 | 671 | 1202 | 702 | 1257 | 733 | 1314 | 763 | 1372 | 793 | 1432 | 821 | 1493 | 849 | 1555 | 877 | 1619 | 903 | 1684 | 929 | 1751 | 954 | 1819 | 979 | 1889 | 1002 | 1960 | 1025 | 2033 | 1047 | 2107 | 1069 | 2182 | 1090 | 2259 | 1110 | 2337 |
| 3400 [1604] | 619 | 1149 | 652 | 1204 | 684 | 1260 | 715 | 1317 | 745 | 1376 | 775 | 1437 | 804 | 1499 | 832 | 1562 | 860 | 1627 | 886 | 1693 | 912 | 1761 | 938 | 1830 | 962 | 1900 | 986 | 1972 | 1009 | 2046 | 1032 | 2121 | 1053 | 2197 | 1074 | 2275 | 1095 | 2354 | 1114 | 2435 |
| 3500 [1652] | 634 | 1206 | 666 | 1263 | 697 | 1322 | 728 | 1382 | 758 | 1443 | 787 | 1506 | 815 | 1570 | 843 | 1635 | 870 | 1702 | 896 | 1771 | 922 | 1841 | 946 | 1912 | 970 | 1985 | 994 | 2060 | 1017 | 2135 | 1038 | 2213 | 1060 | 2291 | 1080 | 2371 | 1100 | 2453 | 1119 | 2536 |
| 3600 [1699] | 648 | 1267 | 680 | 1326 | 711 | 1387 | 741 | 1449 | 770 | 1513 | 799 | 1578 | 827 | 1645 | 854 | 1713 | 880 | 1782 | 906 | 1853 | 931 | 1925 | 955 | 1999 | 979 | 2074 | 1002 | 2151 | 1024 | 2229 | 1045 | 2308 | 1066 | 2389 | 1086 | 2472 | 1105 | 2556 | 1124 | 2641 |
| 3700 [1746] | 663 | 1332 | 694 | 1393 | 724 | 1456 | 754 | 1521 | 783 | 1587 | 811 | 1654 | 838 | 1723 | 865 | 1793 | 891 | 1865 | 916 | 1938 | 941 | 2013 | 965 | 2089 | 988 | 2167 | 1010 | 2246 | 1032 | 2326 | 1053 | 2408 | 1073 | 2491 | 1092 | 2576 | 1111 | 2662 | 1129 | 2750 |
| 3800 [1793] | 678 | 1400 | 708 | 1464 | 738 | 1529 | 767 | 1596 | 795 | 1665 | 823 | 1734 | 850 | 1805 | 876 | 1878 | 902 | 1952 | 926 | 2028 | 951 | 2105 | 974 | 2183 | 996 | 2263 | 1018 | 2344 | 1039 | 2427 | 1060 | 2511 | 1080 | 2597 | 1099 | 2684 | 1117 | 2772 | 1134 | 2862 |
| 3900 [1840] | 693 | 1472 | 723 | 1538 | 752 | 1606 | 781 | 1675 | 808 | 1746 | 836 | 1818 | 862 | 1892 | 888 | 1966 | 913 | 2043 | 937 | 2121 | 961 | 2200 | 983 | 2281 | 1005 | 2363 | 1027 | 2447 | 1048 | 2532 | 1067 | 2618 | 1087 | 2706 | 1105 | 2796 | 1123 | 2886 | 1140 | 2979 |
| 4000 [1888] | 708 | 1548 | 737 | 1617 | 766 | 1687 | 794 | 1758 | 822 | 1831 | 848 | 1906 | 874 | 1981 | 900 | 2059 | 924 | 2137 | 948 | 2218 | 971 | 2299 | 993 | 2382 | 1015 | 2467 | 1036 | 2553 | 1056 | 2640 | 1075 | 2729 | 1094 | 2819 | 1112 | 2911 | 1129 | 3004 | 1146 | 3099 |
| 4100 [1935] | 723 | 1628 | 752 | 1699 | 781 | 1771 | 808 | 1845 | 835 | 1920 | 861 | 1997 | 887 | 2075 | 911 | 2155 | 935 | 2236 | 959 | 2318 | 981 | 2402 | 1003 | 2488 | 1024 | 2574 | 1045 | 2663 | 1064 | 2752 | 1083 | 2844 | 1101 | 2936 | 1119 | 3030 | 1136 | 3126 | 1152 | 3223 |

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 | | | | | | 1VP50*7/8 | | | | | | 1VP56*7/8 | | | | | |
| Belt | A49 | | | | | | A50 | | | | | | A51 | | | | | |
| Turns Open | 0 | 1 | **2** | 3 | 4 | 5 | 0 | 1 | 2 | 3 | 4 | **5** | 0 | 1 | 2 | 3 | 4 | **5** |
| RPM | 804 | 758 | **710** | 661 | 616 | 559 | 1048 | 1003 | 959 | 914 | 872 | **826** | 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 | AIRFLOW CORRECTION FACTORS * | | | COMPONENT AIRFLOW RESISTANCE | | | |
|---|---|---|---|---|---|---|---|
| | | | | Wet Coil | Vertical Economizer RA Damper Open | Concentric Diffuser RXRN-AEF2000 & Concentric Adapter RXMC-DD01 (Flush) | Concentric Diffuser RXRN-AED2000 & Concentric Adapter RXMC-DD01 (Drop) |
| CFM [L/s] | Total MBH | Sensible MBH | Power kW | Resistance — Inches of Water [kPa] | | | |
| 2700 [1274] | 0.97 | 0.93 | 0.99 | 0.07 [.02] | 0.03 [.01] | 0.80 [.20] | 0.65 [.16] |
| 2800 [1321] | 0.98 | 0.94 | 0.99 | 0.07 [.02] | 0.03 [.01] | 0.85 [.21] | 0.69 [.17] |
| 2900 [1368] | 0.98 | 0.96 | 0.99 | 0.08 [.02] | 0.04 [.01] | 0.91 [.23] | 0.74 [.18] |
| 3000 [1416] | 0.99 | 0.97 | 1.00 | 0.08 [.02] | 0.05 [.01] | 0.96 [.24] | 0.79 [.20] |
| 3100 [1463] | 0.99 | 0.99 | 1.00 | 0.09 [.02] | 0.06 [.01] | 1.02 [.25] | 0.86 [.21] |
| 3200 [1510] | 1.00 | 1.00 | 1.00 | 0.10 [.02] | 0.07 [.02] | 1.08 [.27] | 0.92 [.23] |
| 3300 [1557] | 1.01 | 1.01 | 1.00 | 0.10 [.03] | 0.08 [.02] | 1.15 [.29] | 0.99 [.25] |
| 3400 [1604] | 1.01 | 1.03 | 1.01 | 0.11 [.03] | 0.09 [.02] | 1.21 [.30] | 1.05 [.26] |
| 3500 [1652] | 1.02 | 1.04 | 1.01 | 0.11 [.03] | 0.10 [.02] | 1.29 [.32] | 1.09 [.27] |
| 3600 [1699] | 1.02 | 1.06 | 1.01 | 0.12 [.03] | 0.11 [.03] | 1.36 [.34] | 1.13 [.28] |
| 3700 [1746] | 1.03 | 1.07 | 1.02 | 0.13 [.03] | 0.12 [.03] | 1.43 [.36] | 1.18 [.29] |
| 3800 [1793] | 1.03 | 1.09 | 1.02 | 0.13 [.03] | 0.13 [.03] | 1.50 [.37] | 1.23 [.31] |
| 3900 [1840] | 1.04 | 1.10 | 1.02 | 0.14 [.04] | 0.15 [.04] | 1.59 [.40] | 1.31 [.33] |
| 4000 [1888] | 1.05 | 1.12 | 1.02 | 0.14 [.04] | 0.16 [.04] | 1.68 [.42] | 1.38 [.34] |
| 4100 [1935] | 1.05 | 1.13 | 1.03 | 0.15 [.04] | 0.17 [.04] | 1.74 [.43] | 1.44 [.36] |

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

[ ] Designates Metric Conversions

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

| Air Flow CFM [L/s] | Model RGEDZ*102* Voltage 208/230, 460, 575 — 3 phase 60 Hz | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | External Static Pressure — Inches of Water [kPa] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0.1 [.02] | | 0.2 [.05] | | 0.3 [.07] | | 0.4 [.10] | | 0.5 [.12] | | 0.6 [.15] | | 0.7 [.17] | | 0.8 [.20] | | 0.9 [.22] | | 1.0 [.25] | | 1.1 [.27] | | 1.2 [.30] | | 1.3 [.32] | | 1.4 [.35] | | 1.5 [.37] | | 1.6 [.40] | | 1.7 [.42] | | 1.8 [.45] | | 1.9 [.47] | | 2.0 [.50] | |
| | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W | RPM | W |
| 2700 [1274] | — | — | — | — | 577 | 932 | 611 | 969 | 644 | 1009 | 677 | 1052 | 710 | 1098 | 742 | 1147 | 774 | 1199 | 806 | 1254 | 837 | 1312 | 868 | 1373 | 898 | 1437 | 929 | 1505 | 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 | 1355 | 875 | 1418 | 905 | 1484 | 934 | 1553 | 963 | 1624 | 992 | 1699 | 1021 | 1777 | 1049 | 1858 | 1077 | 1942 | 1105 | 2029 |
| 2900 [1368] | — | — | 568 | 958 | 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 | 994 | 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 | 996 | 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 | 1874 | 1033 | 1957 | 1059 | 2043 | 1085 | 2132 | 1111 | 2224 |
| 3200 [1510] | 574 | 1037 | 605 | 1076 | 636 | 1118 | 667 | 1163 | 698 | 1211 | 728 | 1262 | 758 | 1316 | 787 | 1373 | 816 | 1434 | 845 | 1497 | 873 | 1563 | 902 | 1632 | 929 | 1705 | 957 | 1780 | 984 | 1858 | 1010 | 1940 | 1037 | 2024 | 1063 | 2112 | 1088 | 2202 | 1113 | 2296 |
| 3300 [1557] | 587 | 1082 | 618 | 1122 | 648 | 1166 | 679 | 1212 | 709 | 1262 | 738 | 1315 | 767 | 1371 | 796 | 1430 | 825 | 1491 | 853 | 1556 | 881 | 1624 | 908 | 1695 | 936 | 1769 | 962 | 1846 | 989 | 1926 | 1015 | 2009 | 1041 | 2095 | 1066 | 2184 | 1091 | 2276 | 1116 | 2372 |
| 3400 [1604] | 600 | 1130 | 630 | 1172 | 660 | 1217 | 690 | 1266 | 720 | 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 | 2158 | 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 | 2329 | 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 | 2230 | 1016 | 2318 | 1039 | 2410 | 1062 | 2504 | 1084 | 2601 | 1107 | 2701 | 1128 | 2805 |
| 3900 [1840] | 667 | 1426 | 694 | 1477 | 721 | 1530 | 748 | 1587 | 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: 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 | | | | | | 1VP50*7/8 | | | | | | 1VP56*7/8 | | | | | |
| Belt | A49 | | | | | | A50 | | | | | | A51 | | | | | |
| Turns Open | 0 | 1 | **2** | 3 | 4 | 5 | 0 | 1 | 2 | 3 | 4 | **5** | 0 | 1 | 2 | 3 | 4 | **5** |
| RPM | 802 | 754 | **707** | 662 | 616 | 555 | 1048 | 1005 | 960 | 916 | 870 | **827** | 1170 | 1126 | 1085 | 1044 | 1000 | **956** |

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 horizontal airflow with dry coil. Add component resistance (below) to duct resistance to determine total External Static Pressure.

| Airflow | AIRFLOW CORRECTION FACTORS * | | | COMPONENT AIRFLOW RESISTANCE | | | |
|---|---|---|---|---|---|---|---|
| | | | | 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) |
| CFM [L/s] | Total MBH | Sensible MBH | Power kW | Resistance — Inches of Water [kPa] | | | |
| 2700 [1274] | 0.97 | 0.93 | 0.99 | 0.07 [.02] | 0.03 [.01] | 0.80 [.20] | 0.65 [.16] |
| 2800 [1321] | 0.98 | 0.94 | 0.99 | 0.07 [.02] | 0.03 [.01] | 0.85 [.21] | 0.69 [.17] |
| 2900 [1368] | 0.98 | 0.96 | 0.99 | 0.08 [.02] | 0.04 [.01] | 0.91 [.23] | 0.74 [.18] |
| 3000 [1416] | 0.99 | 0.97 | 1.00 | 0.08 [.02] | 0.05 [.01] | 0.96 [.24] | 0.79 [.20] |
| 3100 [1463] | 0.99 | 0.99 | 1.00 | 0.09 [.02] | 0.06 [.01] | 1.02 [.25] | 0.86 [.21] |
| 3200 [1510] | 1.00 | 1.00 | 1.00 | 0.10 [.02] | 0.07 [.02] | 1.08 [.27] | 0.92 [.23] |
| 3300 [1557] | 1.01 | 1.01 | 1.00 | 0.10 [.03] | 0.08 [.02] | 1.15 [.29] | 0.99 [.25] |
| 3400 [1604] | 1.01 | 1.03 | 1.01 | 0.11 [.03] | 0.09 [.02] | 1.21 [.30] | 1.05 [.26] |
| 3500 [1652] | 1.02 | 1.04 | 1.01 | 0.11 [.03] | 0.10 [.02] | 1.29 [.32] | 1.09 [.27] |
| 3600 [1699] | 1.02 | 1.06 | 1.01 | 0.12 [.03] | 0.11 [.03] | 1.36 [.34] | 1.13 [.28] |
| 3700 [1746] | 1.03 | 1.07 | 1.02 | 0.13 [.03] | 0.12 [.03] | 1.43 [.36] | 1.18 [.29] |
| 3800 [1793] | 1.03 | 1.09 | 1.02 | 0.13 [.03] | 0.13 [.03] | 1.50 [.37] | 1.23 [.31] |
| 3900 [1840] | 1.04 | 1.10 | 1.02 | 0.14 [.04] | 0.15 [.04] | 1.59 [.40] | 1.31 [.33] |
| 4000 [1888] | 1.05 | 1.12 | 1.02 | 0.15 [.04] | 0.16 [.04] | 1.68 [.42] | 1.38 [.34] |
| 4100 [1935] | 1.05 | 1.13 | 1.03 | 0.15 [.04] | 0.17 [.04] | 1.74 [.43] | 1.44 [.36] |

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

[ ] Designates Metric Conversions

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

| Air Flow CFM [L/s] | Model RGEDZ*120* Voltage 208/230, 460, 575 — 3 phase 60 Hz | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 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 |
| 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 | 1859 | 1018 | 1931 | 1041 | 2004 | 1064 | 2080 | 1085 | 2157 | 1107 | 2236 |
| 3300 [1557] | 610 | 1092 | 642 | 1141 | 674 | 1192 | 705 | 1244 | 735 | 1299 | 764 | 1355 | 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 | 901 | 1937 | 926 | 2014 | 950 | 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 | 2335 | 968 | 2423 | 990 | 2513 | 1012 | 2604 | 1033 | 2698 | 1054 | 2793 | 1074 | 2890 | 1093 | 2989 | 1112 | 3090 | 1130 | 3192 | 1147 | 3296 | 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 | 3327 | 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 | 1VL40*7/8 | | | | | | 1VP50*7/8 | | | | | | 1VP56*7/8 | | | | | |
| Belt | A49 | | | | | | A50 | | | | | | A51 | | | | | |
| Turns Open | 0 | 1 | **2** | 3 | 4 | 5 | 0 | 1 | 2 | 3 | 4 | **5** | 0 | 1 | 2 | 3 | 4 | **5** |
| RPM | 802 | 758 | **710** | 661 | 616 | 559 | 1040 | 999 | 955 | 911 | 868 | **824** | 1155 | 1120 | 1080 | 1039 | 996 | **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 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 | AIRFLOW CORRECTION FACTORS * | | | COMPONENT AIRFLOW RESISTANCE | | | |
|---|---|---|---|---|---|---|---|
| | | | | Wet Coil | Vertical Economizer RA Damper Open | Concentric Diffuser RXRN-AEF3415 & Diffuser RXMC-DD02 (Flush) | Concentric Diffuser RXRN-AED3415 & Diffuser RXMC-DD02 (Drop) |
| CFM [L/s] | Total MBH | Sensible MBH | Power kW | Resistance — Inches of Water [kPa] | | | |
| 3200 [1510] | 0.97 | 0.93 | 0.99 | 0.10 [.02] | 0.07 [.02] | 0.74 [.18] | 0.56 [.14] |
| 3300 [1557] | 0.98 | 0.94 | 0.99 | 0.10 [.03] | 0.08 [.02] | 0.79 [.20] | 0.59 [.15] |
| 3400 [1604] | 0.98 | 0.96 | 0.99 | 0.11 [.03] | 0.09 [.02] | 0.84 [.21] | 0.62 [.15] |
| 3500 [1652] | 0.99 | 0.97 | 1.00 | 0.11 [.03] | 0.10 [.02] | 0.90 [.22] | 0.66 [.16] |
| 3600 [1699] | 0.99 | 0.98 | 1.00 | 0.12 [.03] | 0.11 [.03] | 0.95 [.24] | 0.69 [.17] |
| 3700 [1746] | 1.00 | 0.99 | 1.00 | 0.13 [.03] | 0.12 [.03] | 1.00 [.25] | 0.73 [.18] |
| 3800 [1793] | 1.00 | 1.01 | 1.00 | 0.13 [.03] | 0.13 [.03] | 1.04 [.26] | 0.76 [.19] |
| 3900 [1840] | 1.01 | 1.02 | 1.00 | 0.14 [.04] | 0.15 [.04] | 1.09 [.27] | 0.80 [.20] |
| 4000 [1888] | 1.01 | 1.03 | 1.01 | 0.15 [.04] | 0.16 [.04] | 1.13 [.28] | 0.84 [.21] |
| 4100 [1935] | 1.02 | 1.04 | 1.01 | 0.15 [.04] | 0.17 [.04] | 1.19 [.30] | 0.88 [.22] |
| 4200 [1982] | 1.02 | 1.06 | 1.01 | 0.16 [.04] | 0.19 [.05] | 1.24 [.31] | 0.92 [.23] |
| 4300 [2029] | 1.03 | 1.07 | 1.01 | 0.17 [.04] | 0.20 [.05] | 1.31 [.33] | 0.97 [.24] |
| 4400 [2076] | 1.03 | 1.08 | 1.01 | 0.18 [.04] | 0.21 [.05] | 1.37 [.34] | 1.02 [.25] |
| 4500 [2123] | 1.04 | 1.09 | 1.02 | 0.19 [.05] | 0.23 [.06] | 1.43 [.35] | 1.07 [.27] |
| 4600 [2171] | 1.04 | 1.11 | 1.02 | 0.19 [.05] | 0.24 [.06] | 1.48 [.37] | 1.11 [.28] |
| 4700 [2218] | 1.05 | 1.12 | 1.02 | 0.20 [.05] | 0.26 [.06] | 1.54 [.38] | 1.15 [.29] |
| 4800 [2265] | 1.05 | 1.13 | 1.02 | 0.21 [.05] | 0.28 [.07] | 1.59 [.40] | 1.19 [.30] |

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

[ ] Designates Metric Conversions

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

| Air Flow CFM [L/s] | Model RGEDZ*120* Voltage 208/230, 460, 575 — 3 phase 60 Hz | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 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 |
| 3200 [1510] | 575 | 1018 | 607 | 1057 | 637 | 1099 | 667 | 1143 | 697 | 1191 | 727 | 1240 | 756 | 1293 | 785 | 1348 | 814 | 1406 | 842 | 1466 | 870 | 1529 | 897 | 1595 | 924 | 1664 | 951 | 1735 | 978 | 1809 | 1004 | 1885 | 1030 | 1965 | 1055 | 2047 | 1080 | 2131 | 1105 | 2219 |
| 3300 [1557] | 588 | 1060 | 618 | 1101 | 649 | 1146 | 679 | 1192 | 708 | 1242 | 737 | 1294 | 766 | 1349 | 795 | 1406 | 823 | 1466 | 850 | 1529 | 878 | 1595 | 905 | 1663 | 932 | 1734 | 958 | 1808 | 984 | 1884 | 1010 | 1963 | 1035 | 2045 | 1060 | 2129 | 1085 | 2216 | 1109 | 2306 |
| 3400 [1604] | 600 | 1106 | 630 | 1150 | 660 | 1196 | 690 | 1245 | 719 | 1297 | 748 | 1352 | 776 | 1409 | 804 | 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 | 1681 | 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 | 957 | 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 | 2799 | 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 | 826 | 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 | 3392 | 1097 | 3504 | 1116 | 3619 | 1135 | 3736 | 1153 | 3856 | — | — | — | — |

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 | | | | | | 1VP50*7/8 | | | | | | 1VP56*7/8 | | | | | |
| Belt | A49 | | | | | | A50 | | | | | | A51 | | | | | |
| Turns Open | 0 | 1 | **2** | 3 | 4 | 5 | 0 | 1 | 2 | 3 | 4 | **5** | 0 | 1 | 2 | 3 | 4 | **5** |
| RPM | 798 | 753 | **707** | 663 | 616 | 556 | 1041 | 998 | 955 | 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 AHRI 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 | AIRFLOW CORRECTION FACTORS * | | | COMPONENT AIRFLOW RESISTANCE | | | |
|---|---|---|---|---|---|---|---|
| | | | | Wet Coil | Horizontal Economizer RA Damper Open | Concentric Diffuser RXRN-AEF3415 & Diffuser RXMC-DD02 (Flush) | Concentric Diffuser RXRN-AED3415 & Diffuser RXMC-DD02 (Drop) |
| CFM [L/s] | Total MBH | Sensible MBH | Power kW | Resistance — Inches of Water [kPa] | | | |
| 3200 [1510] | 0.97 | 0.93 | 0.99 | 0.10 [.02] | 0.07 [.02] | 0.74 [.18] | 0.56 [.14] |
| 3300 [1557] | 0.98 | 0.94 | 0.99 | 0.10 [.03] | 0.08 [.02] | 0.79 [.20] | 0.59 [.15] |
| 3400 [1604] | 0.98 | 0.96 | 0.99 | 0.11 [.03] | 0.09 [.02] | 0.84 [.21] | 0.62 [.15] |
| 3500 [1652] | 0.99 | 0.97 | 1.00 | 0.11 [.03] | 0.10 [.02] | 0.90 [.22] | 0.66 [.16] |
| 3600 [1699] | 0.99 | 0.98 | 1.00 | 0.12 [.03] | 0.11 [.03] | 0.95 [.24] | 0.69 [.17] |
| 3700 [1746] | 1.00 | 0.99 | 1.00 | 0.13 [.03] | 0.12 [.03] | 1.00 [.25] | 0.73 [.18] |
| 3800 [1793] | 1.00 | 1.01 | 1.00 | 0.13 [.03] | 0.13 [.03] | 1.04 [.26] | 0.76 [.19] |
| 3900 [1840] | 1.01 | 1.02 | 1.00 | 0.14 [.04] | 0.15 [.04] | 1.09 [.27] | 0.80 [.20] |
| 4000 [1888] | 1.01 | 1.03 | 1.01 | 0.15 [.04] | 0.16 [.04] | 1.13 [.28] | 0.84 [.21] |
| 4100 [1935] | 1.02 | 1.04 | 1.01 | 0.15 [.04] | 0.17 [.04] | 1.19 [.30] | 0.88 [.22] |
| 4200 [1982] | 1.02 | 1.06 | 1.01 | 0.16 [.04] | 0.19 [.05] | 1.24 [.31] | 0.92 [.23] |
| 4300 [2029] | 1.03 | 1.07 | 1.01 | 0.17 [.04] | 0.20 [.05] | 1.31 [.33] | 0.97 [.24] |
| 4400 [2076] | 1.03 | 1.08 | 1.01 | 0.18 [.04] | 0.21 [.05] | 1.37 [.34] | 1.02 [.25] |
| 4500 [2123] | 1.04 | 1.09 | 1.02 | 0.19 [.05] | 0.23 [.06] | 1.43 [.35] | 1.07 [.27] |
| 4600 [2171] | 1.04 | 1.11 | 1.02 | 0.19 [.05] | 0.24 [.06] | 1.48 [.37] | 1.11 [.28] |
| 4700 [2218] | 1.05 | 1.12 | 1.02 | 0.20 [.05] | 0.26 [.06] | 1.54 [.38] | 1.15 [.29] |
| 4800 [2265] | 1.05 | 1.13 | 1.02 | 0.21 [.05] | 0.28 [.07] | 1.59 [.40] | 1.19 [.30] |

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

[ ] Designates Metric Conversions

# AIRFLOW PERFORMANCE — 12.5 TON [43.9kW] — 60 Hz — DOWNFLOW

| Air Flow CFM [L/s] | Model RGEDZ*150* Voltage 208/230, 460, 575 — 3 phase 60 Hz | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 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] | 766 | 1776 | 795 | 1806 | 824 | 1842 | 851 | 1883 | 878 | 1931 | 904 | 1985 | 929 | 2044 | 953 | 2110 | 976 | 2181 | 998 | 2259 | 1019 | 2342 | 1040 | 2431 | 1059 | 2526 | 1078 | 2627 | 1096 | 2734 | 1113 | 2847 | 1129 | 2966 | 1144 | 3091 | 1158 | 3221 | 1171 | 3358 |
| 4100 [1935] | 778 | 1820 | 807 | 1856 | 835 | 1897 | 862 | 1944 | 888 | 1997 | 913 | 2056 | 937 | 2120 | 961 | 2191 | 983 | 2268 | 1005 | 2350 | 1026 | 2439 | 1045 | 2533 | 1064 | 2634 | 1082 | 2740 | 1099 | 2852 | 1116 | 2970 | 1131 | 3094 | 1145 | 3224 | 1159 | 3360 | 1171 | 3502 |
| 4200 [1982] | 792 | 1875 | 820 | 1915 | 847 | 1961 | 873 | 2014 | 899 | 2072 | 923 | 2136 | 947 | 2206 | 969 | 2282 | 991 | 2364 | 1012 | 2451 | 1032 | 2545 | 1051 | 2645 | 1070 | 2750 | 1087 | 2862 | 1103 | 2979 | 1119 | 3102 | 1134 | 3232 | 1147 | 3367 | 1160 | 3508 | 1172 | 3655 |
| 4300 [2029] | 806 | 1938 | 833 | 1984 | 859 | 2036 | 885 | 2093 | 910 | 2156 | 934 | 2226 | 957 | 2301 | 979 | 2382 | 1000 | 2469 | 1020 | 2562 | 1040 | 2661 | 1058 | 2766 | 1076 | 2877 | 1092 | 2993 | 1108 | 3116 | 1123 | 3244 | 1137 | 3379 | 1150 | 3519 | 1162 | 3665 | 1174 | 3818 |
| 4400 [2076] | 820 | 2012 | 847 | 2063 | 873 | 2119 | 898 | 2182 | 922 | 2251 | 945 | 2325 | 967 | 2406 | 989 | 2492 | 1009 | 2584 | 1029 | 2682 | 1048 | 2787 | 1065 | 2897 | 1082 | 3013 | 1098 | 3134 | 1113 | 3262 | 1128 | 3396 | 1141 | 3536 | 1154 | 3681 | 1165 | 3833 | 1176 | 3990 |
| 4500 [2123] | 835 | 2095 | 861 | 2151 | 886 | 2213 | 911 | 2281 | 934 | 2355 | 957 | 2434 | 978 | 2520 | 999 | 2611 | 1019 | 2709 | 1038 | 2812 | 1056 | 2922 | 1073 | 3037 | 1090 | 3158 | 1105 | 3285 | 1119 | 3418 | 1133 | 3557 | 1146 | 3702 | 1158 | 3853 | 1168 | 4009 | 1178 | 4172 |
| 4600 [2171] | 851 | 2187 | 876 | 2249 | 901 | 2316 | 925 | 2389 | 947 | 2468 | 969 | 2553 | 990 | 2644 | 1010 | 2740 | 1030 | 2843 | 1048 | 2952 | 1065 | 3066 | 1082 | 3187 | 1097 | 3313 | 1112 | 3445 | 1126 | 3584 | 1139 | 3728 | 1151 | 3878 | 1162 | 4034 | 1172 | 4196 | 1182 | 4363 |
| 4700 [2218] | 867 | 2290 | 892 | 2356 | 916 | 2428 | 939 | 2507 | 961 | 2591 | 982 | 2681 | 1003 | 2777 | 1022 | 2879 | 1041 | 2987 | 1058 | 3101 | 1075 | 3220 | 1091 | 3346 | 1106 | 3478 | 1120 | 3615 | 1133 | 3759 | 1145 | 3908 | 1157 | 4063 | 1167 | 4224 | 1177 | 4391 | 1186 | 4564 |
| 4800 [2265] | 884 | 2401 | 908 | 2473 | 932 | 2551 | 954 | 2634 | 975 | 2723 | 996 | 2819 | 1016 | 2920 | 1034 | 3027 | 1052 | 3140 | 1069 | 3259 | 1085 | 3384 | 1101 | 3515 | 1115 | 3652 | 1128 | 3795 | 1141 | 3943 | 1153 | 4098 | 1163 | 4258 | 1173 | 4425 | 1182 | 4597 | 1190 | 4775 |
| 4900 [2312] | 902 | 2523 | 925 | 2599 | 948 | 2682 | 969 | 2771 | 990 | 2866 | 1010 | 2966 | 1029 | 3073 | 1047 | 3185 | 1065 | 3303 | 1081 | 3427 | 1097 | 3558 | 1111 | 3694 | 1125 | 3836 | 1138 | 3984 | 1149 | 4137 | 1160 | 4297 | 1170 | 4463 | 1180 | 4634 | 1188 | 4812 | 1195 | 4995 |
| 5000 [2359] | 920 | 2653 | 943 | 2736 | 965 | 2824 | 986 | 2917 | 1006 | 3017 | 1025 | 3123 | 1044 | 3235 | 1061 | 3352 | 1078 | 3476 | 1093 | 3605 | 1108 | 3741 | 1122 | 3882 | 1135 | 4029 | 1147 | 4182 | 1158 | 4341 | 1169 | 4506 | 1178 | 4677 | 1187 | 4854 | 1194 | 5036 | 1201 | 5225 |
| 5100 [2407] | 939 | 2794 | 961 | 2881 | 982 | 2974 | 1003 | 3073 | 1022 | 3179 | 1041 | 3289 | 1058 | 3406 | 1075 | 3529 | 1091 | 3658 | 1106 | 3792 | 1120 | 3933 | 1134 | 4079 | 1146 | 4232 | 1158 | 4390 | 1168 | 4554 | 1178 | 4725 | 1187 | 4901 | 1194 | 5083 | 1201 | 5270 | 1208 | 5464 |
| 5200 [2454] | 958 | 2944 | 980 | 3036 | 1000 | 3135 | 1020 | 3239 | 1039 | 3349 | 1057 | 3465 | 1074 | 3588 | 1090 | 3716 | 1105 | 3849 | 1120 | 3989 | 1133 | 4135 | 1146 | 4287 | 1158 | 4444 | 1168 | 4608 | 1178 | 4777 | 1187 | 4953 | 1196 | 5134 | 1203 | 5321 | 1209 | 5514 | 1215 | 5713 |
| 5300 [2501] | 978 | 3103 | 999 | 3201 | 1019 | 3305 | 1038 | 3414 | 1056 | 3530 | 1074 | 3651 | 1090 | 3778 | 1106 | 3912 | 1120 | 4051 | 1134 | 4196 | 1147 | 4347 | 1159 | 4504 | 1170 | 4666 | 1180 | 4835 | 1189 | 5010 | 1198 | 5190 | 1205 | 5377 | 1212 | 5569 | 1217 | 5767 | 1222 | 5972 |
| 5400 [2548] | 999 | 3273 | 1019 | 3376 | 1038 | 3484 | 1057 | 3599 | 1074 | 3720 | 1091 | 3846 | 1107 | 3979 | 1122 | 4117 | 1136 | 4261 | 1149 | 4412 | 1161 | 4568 | 1172 | 4730 | 1183 | 4898 | 1192 | 5072 | 1201 | 5252 | 1209 | 5438 | 1215 | 5629 | 1221 | 5827 | 1226 | 6030 | — | — |
| 5500 [2595] | 1020 | 3451 | 1040 | 3559 | 1058 | 3673 | 1076 | 3793 | 1093 | 3919 | 1109 | 4051 | 1124 | 4189 | 1138 | 4332 | 1152 | 4482 | 1164 | 4637 | 1176 | 4799 | 1186 | 4966 | 1196 | 5139 | 1205 | 5318 | 1213 | 5503 | 1220 | 5694 | 1226 | 5891 | — | — | — | — | — | — |
| 5600 [2643] | 1042 | 3640 | 1061 | 3753 | 1079 | 3872 | 1096 | 3997 | 1112 | 4128 | 1128 | 4265 | 1142 | 4408 | 1156 | 4557 | 1168 | 4712 | 1180 | 4872 | 1191 | 5039 | 1201 | 5212 | 1210 | 5390 | 1218 | 5574 | 1226 | 5765 | — | — | — | — | — | — | — | — | — | — |
| 5700 [2690] | 1064 | 3838 | 1083 | 3956 | 1100 | 4080 | 1117 | 4211 | 1132 | 4347 | 1147 | 4489 | 1161 | 4637 | 1174 | 4791 | 1186 | 4951 | 1197 | 5117 | 1207 | 5289 | 1216 | 5467 | 1225 | 5650 | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 5800 [2737] | 1088 | 4045 | 1105 | 4169 | 1122 | 4298 | 1138 | 4434 | 1153 | 4575 | 1167 | 4723 | 1180 | 4876 | 1192 | 5035 | 1204 | 5200 | 1214 | 5371 | 1224 | 5548 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 5900 [2784] | 1111 | 4262 | 1128 | 4391 | 1144 | 4526 | 1160 | 4666 | 1174 | 4813 | 1187 | 4966 | 1200 | 5124 | 1211 | 5289 | 1222 | 5459 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 6000 [2831] | 1136 | 4489 | 1152 | 4623 | 1167 | 4763 | 1182 | 4909 | 1196 | 5061 | 1208 | 5218 | 1220 | 5382 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

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

| Drive Package | A | | | | | | B | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Motor H.P. [W] | 3 [1118.5] | | | | | | 5 [2237.1] | | | | | |
| Blower Sheave | AK71H | | | | | | AK79H | | | | | |
| Motor Sheave | 1VL44*7/8 | | | | | | 1VP60*1x1/8 | | | | | |
| Belt | A48 | | | | | | A52 | | | | | |
| Turns Open | 0 | 1 | **2** | 3 | 4 | 5 | 0 | 1 | 2 | 3 | 4 | **5** |
| RPM | 1003 | 958 | **912** | 863 | 814 | 764 | 1220 | 1171 | 1127 | 1085 | 1039 | **994** |

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 | AIRFLOW CORRECTION FACTORS * | | | COMPONENT AIRFLOW RESISTANCE | | | |
|---|---|---|---|---|---|---|---|
| | | | | Wet Coil | Vertical Economizer RA Damper Open | Concentric Diffuser RXRN-AEF3618 & Concentric Adapter RXMC-DD03 (Flush) | Concentric Diffuser RXRN-AED3618 & Concentric Adapter RXMC-DD03 (Drop) |
| CFM [L/s] | Total MBH | Sensible MBH | Power kW | Resistance — Inches of Water [kPa] | | | |
| 4000 [1888] | 1.01 | 1.03 | 1.01 | 0.15 [.04] | 0.16 [.04] | 0.76 [.19] | 0.68 [.17] |
| 4100 [1935] | 1.02 | 1.04 | 1.01 | 0.16 [.04] | 0.17 [.04] | 0.79 [.20] | 0.72 [.18] |
| 4200 [1982] | 1.02 | 1.06 | 1.01 | 0.17 [.04] | 0.19 [.05] | 0.82 [.20] | 0.75 [.19] |
| 4300 [2029] | 1.03 | 1.07 | 1.01 | 0.17 [.04] | 0.20 [.05] | 0.86 [.21] | 0.79 [.20] |
| 4400 [2076] | 1.03 | 1.08 | 1.01 | 0.18 [.05] | 0.21 [.05] | 0.90 [.22] | 0.83 [.21] |
| 4500 [2123] | 1.04 | 1.09 | 1.02 | 0.19 [.05] | 0.23 [.06] | 0.94 [.23] | 0.86 [.21] |
| 4600 [2171] | 1.04 | 1.11 | 1.02 | 0.20 [.05] | 0.24 [.06] | 0.98 [.24] | 0.89 [.22] |
| 4700 [2218] | 1.05 | 1.12 | 1.02 | 0.21 [.05] | 0.26 [.06] | 1.02 [.25] | 0.94 [.23] |
| 4800 [2265] | 1.05 | 1.13 | 1.02 | 0.21 [.05] | 0.28 [.07] | 1.06 [.26] | 0.98 [.24] |
| 4900 [2312] | 1.06 | 1.14 | 1.02 | 0.22 [.06] | 0.29 [.07] | 1.10 [.27] | 1.01 [.25] |
| 5000 [2359] | 1.06 | 1.16 | 1.03 | 0.23 [.06] | 0.31 [.08] | 1.14 [.28] | 1.04 [.26] |
| 5100 [2407] | 1.07 | 1.17 | 1.03 | 0.24 [.06] | 0.33 [.08] | 1.18 [.29] | 1.07 [.27] |
| 5200 [2454] | 1.07 | 1.18 | 1.03 | 0.25 [.06] | 0.35 [.09] | 1.22 [.30] | 1.10 [.27] |
| 5300 [2501] | 1.08 | 1.19 | 1.03 | 0.26 [.06] | 0.36 [.09] | 1.27 [.32] | 1.15 [.29] |
| 5400 [2548] | 1.08 | 1.21 | 1.03 | 0.27 [.07] | 0.38 [.09] | 1.33 [.33] | 1.20 [.30] |
| 5500 [2595] | 1.09 | 1.22 | 1.04 | 0.28 [.07] | 0.40 [.10] | 1.37 [.34] | 1.25 [.31] |
| 5600 [2643] | 1.09 | 1.23 | 1.04 | 0.29 [.07] | 0.42 [.10] | 1.42 [.35] | 1.30 [.32] |
| 5700 [2690] | 1.10 | 1.24 | 1.04 | 0.30 [.07] | 0.44 [.11] | 1.47 [.37] | 1.34 [.33] |
| 5800 [2737] | 1.10 | 1.26 | 1.04 | 0.31 [.08] | 0.46 [.11] | 1.52 [.38] | 1.38 [.34] |
| 5900 [2784] | 1.10 | 1.27 | 1.05 | 0.32 [.08] | 0.48 [.12] | 1.56 [.39] | 1.42 [.35] |
| 6000 [2831] | 1.11 | 1.28 | 1.05 | 0.33 [.08] | 0.51 [.13] | 1.60 [.40] | 1.45 [.36] |

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

[ ] Designates Metric Conversions

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

| Air Flow CFM [L/s] | Model RGEDZ*150* Voltage 208/230, 460, 575 — 3 phase 60 Hz | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 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 | 993 | 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 | 1860 | 828 | 1932 | 854 | 2004 | 880 | 2077 | 905 | 2150 | 929 | 2225 | 952 | 2300 | 975 | 2377 | 997 | 2454 | 1019 | 2532 | 1040 | 2611 | 1060 | 2691 | 1079 | 2771 | 1098 | 2853 | 1116 | 2935 | 1133 | 3018 | 1150 | 3102 | 1166 | 3187 | 1181 | 3272 | 1196 | 3359 |
| 4300 [2029] | 819 | 1954 | 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 | 3235 | 1174 | 3323 | 1188 | 3411 | 1202 | 3500 |
| 4400 [2076] | 837 | 2053 | 863 | 2129 | 888 | 2207 | 912 | 2284 | 936 | 2363 | 959 | 2443 | 981 | 2523 | 1003 | 2605 | 1024 | 2687 | 1044 | 2770 | 1064 | 2854 | 1082 | 2938 | 1101 | 3024 | 1118 | 3110 | 1135 | 3197 | 1151 | 3286 | 1166 | 3375 | 1181 | 3464 | 1195 | 3555 | 1208 | 3646 |
| 4500 [2123] | 855 | 2159 | 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 | 3354 | 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 | 1169 | 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 | 1102 | 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 | 3626 | 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 | 3993 | 1167 | 4096 | 1180 | 4200 | 1192 | 4304 | 1204 | 4410 | 1214 | 4516 | — | — | — | — | — | — |
| 5200 [2454] | 975 | 3063 | 995 | 3160 | 1015 | 3256 | 1034 | 3354 | 1053 | 3453 | 1070 | 3552 | 1087 | 3653 | 1104 | 3754 | 1120 | 3856 | 1135 | 3959 | 1149 | 4063 | 1162 | 4167 | 1175 | 4273 | 1188 | 4379 | 1199 | 4486 | 1210 | 4594 | 1220 | 4703 | — | — | — | — | — | — |
| 5300 [2501] | 991 | 3217 | 1010 | 3315 | 1030 | 3415 | 1048 | 3515 | 1066 | 3616 | 1083 | 3718 | 1100 | 3821 | 1115 | 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 | 4067 | 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] | 1052 | 3888 | 1069 | 3997 | 1086 | 4106 | 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*1x1/2 | | | | | |
| Belt | A48 | | | | | | A52 | | | | | |
| Turns Open | 0 | 1 | **2** | 3 | 4 | 5 | 0 | 1 | 2 | 3 | 4 | **5** |
| RPM | 1002 | 955 | **909** | 862 | 813 | 765 | 1208 | 1171 | 1127 | 1084 | 1038 | **995** |

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 horizontal airflow with dry coil. Add component resistance (below) to duct resistance to determine total External Static Pressure.

| Airflow | AIRFLOW CORRECTION FACTORS * | | | COMPONENT AIRFLOW RESISTANCE | | | |
|---|---|---|---|---|---|---|---|
| | | | | Wet Coil | Horizontal Economizer RA Damper Open | Concentric Diffuser RXRN-AEF3618 & Concentric Adapter RXMC-DD03 (Flush) | Concentric Diffuser RXRN-AED3618 & Concentric Adapter RXMC-DD03 (Drop) |
| CFM [L/s] | Total MBH | Sensible MBH | Power kW | Resistance — Inches of Water [kPa] | | | |
| 4000 [1888] | 1.01 | 1.03 | 1.01 | 0.15 [.04] | 0.16 [.04] | 0.76 [.19] | 0.68 [.17] |
| 4100 [1935] | 1.02 | 1.04 | 1.01 | 0.16 [.04] | 0.17 [.04] | 0.79 [.20] | 0.72 [.18] |
| 4200 [1982] | 1.02 | 1.06 | 1.01 | 0.17 [.04] | 0.19 [.05] | 0.82 [.20] | 0.75 [.19] |
| 4300 [2029] | 1.03 | 1.07 | 1.01 | 0.17 [.04] | 0.20 [.05] | 0.86 [.21] | 0.79 [.20] |
| 4400 [2076] | 1.03 | 1.08 | 1.01 | 0.18 [.05] | 0.21 [.05] | 0.90 [.22] | 0.83 [.21] |
| 4500 [2123] | 1.04 | 1.09 | 1.02 | 0.19 [.05] | 0.23 [.06] | 0.94 [.23] | 0.86 [.21] |
| 4600 [2171] | 1.04 | 1.11 | 1.02 | 0.20 [.05] | 0.24 [.06] | 0.98 [.24] | 0.89 [.22] |
| 4700 [2218] | 1.05 | 1.12 | 1.02 | 0.21 [.05] | 0.26 [.06] | 1.02 [.25] | 0.94 [.23] |
| 4800 [2265] | 1.05 | 1.13 | 1.02 | 0.21 [.05] | 0.28 [.07] | 1.06 [.26] | 0.98 [.24] |
| 4900 [2312] | 1.06 | 1.14 | 1.02 | 0.22 [.06] | 0.29 [.07] | 1.10 [.27] | 1.01 [.25] |
| 5000 [2359] | 1.06 | 1.16 | 1.03 | 0.23 [.06] | 0.31 [.08] | 1.14 [.28] | 1.04 [.26] |
| 5100 [2407] | 1.07 | 1.17 | 1.03 | 0.24 [.06] | 0.33 [.08] | 1.18 [.29] | 1.07 [.27] |
| 5200 [2454] | 1.07 | 1.18 | 1.03 | 0.25 [.06] | 0.35 [.09] | 1.22 [.30] | 1.10 [.27] |
| 5300 [2501] | 1.08 | 1.19 | 1.03 | 0.26 [.06] | 0.36 [.09] | 1.27 [.32] | 1.15 [.29] |
| 5400 [2548] | 1.08 | 1.21 | 1.03 | 0.27 [.07] | 0.38 [.09] | 1.33 [.33] | 1.20 [.30] |
| 5500 [2595] | 1.09 | 1.22 | 1.04 | 0.28 [.07] | 0.40 [.10] | 1.37 [.34] | 1.25 [.31] |
| 5600 [2643] | 1.09 | 1.23 | 1.04 | 0.29 [.07] | 0.42 [.10] | 1.42 [.35] | 1.30 [.32] |
| 5700 [2690] | 1.10 | 1.24 | 1.04 | 0.30 [.07] | 0.44 [.11] | 1.47 [.37] | 1.34 [.33] |
| 5800 [2737] | 1.10 | 1.26 | 1.04 | 0.31 [.08] | 0.46 [.11] | 1.52 [.38] | 1.38 [.34] |
| 5900 [2784] | 1.10 | 1.27 | 1.05 | 0.32 [.08] | 0.48 [.12] | 1.56 [.39] | 1.42 [.35] |
| 6000 [2831] | 1.11 | 1.28 | 1.05 | 0.33 [.08] | 0.51 [.13] | 1.60 [.40] | 1.45 [.36] |

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

[ ] Designates Metric Conversions

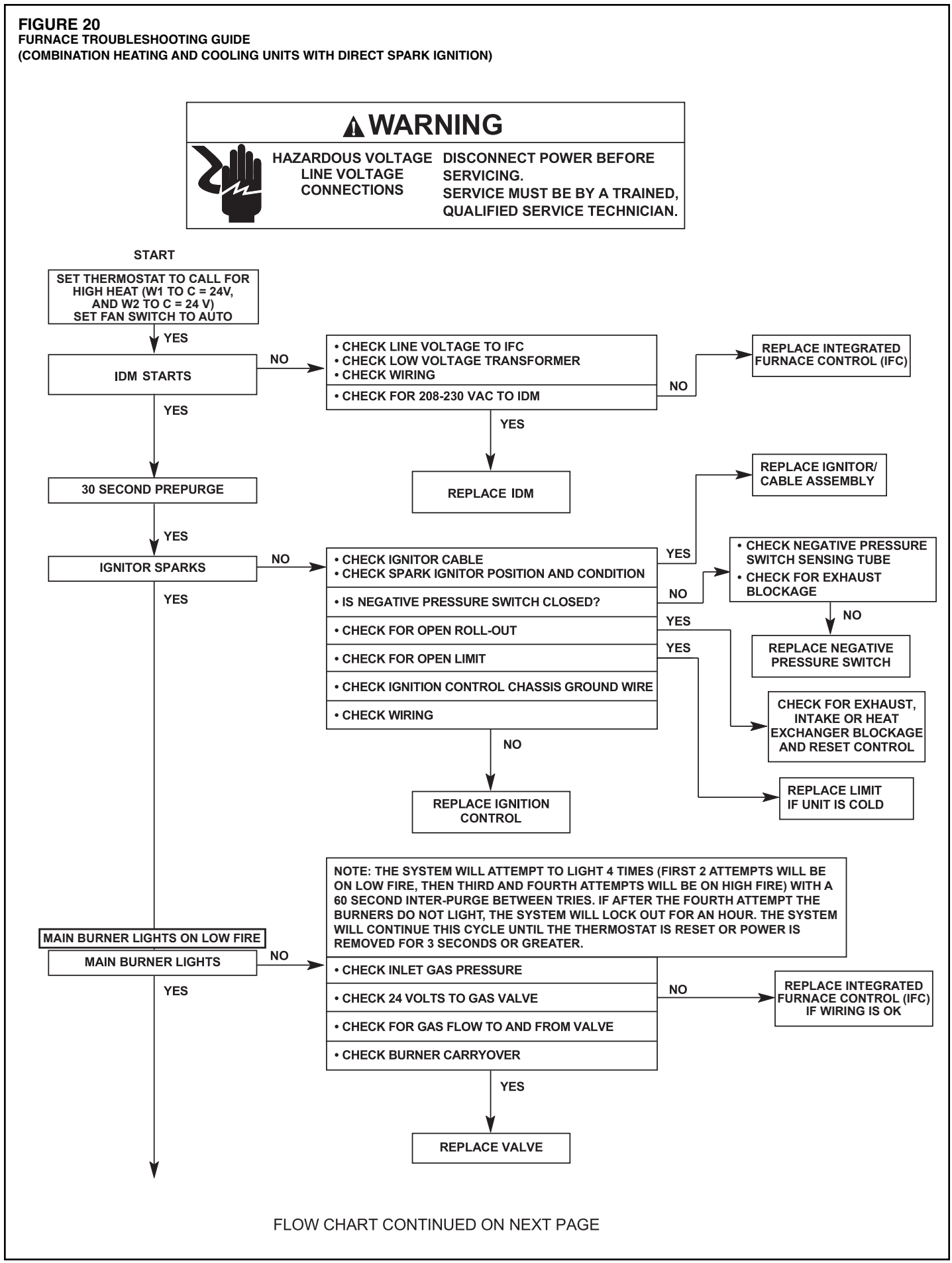
# FIGURE 19
# COOLING TROUBLESHOOTING CHART

**⚠ 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.**

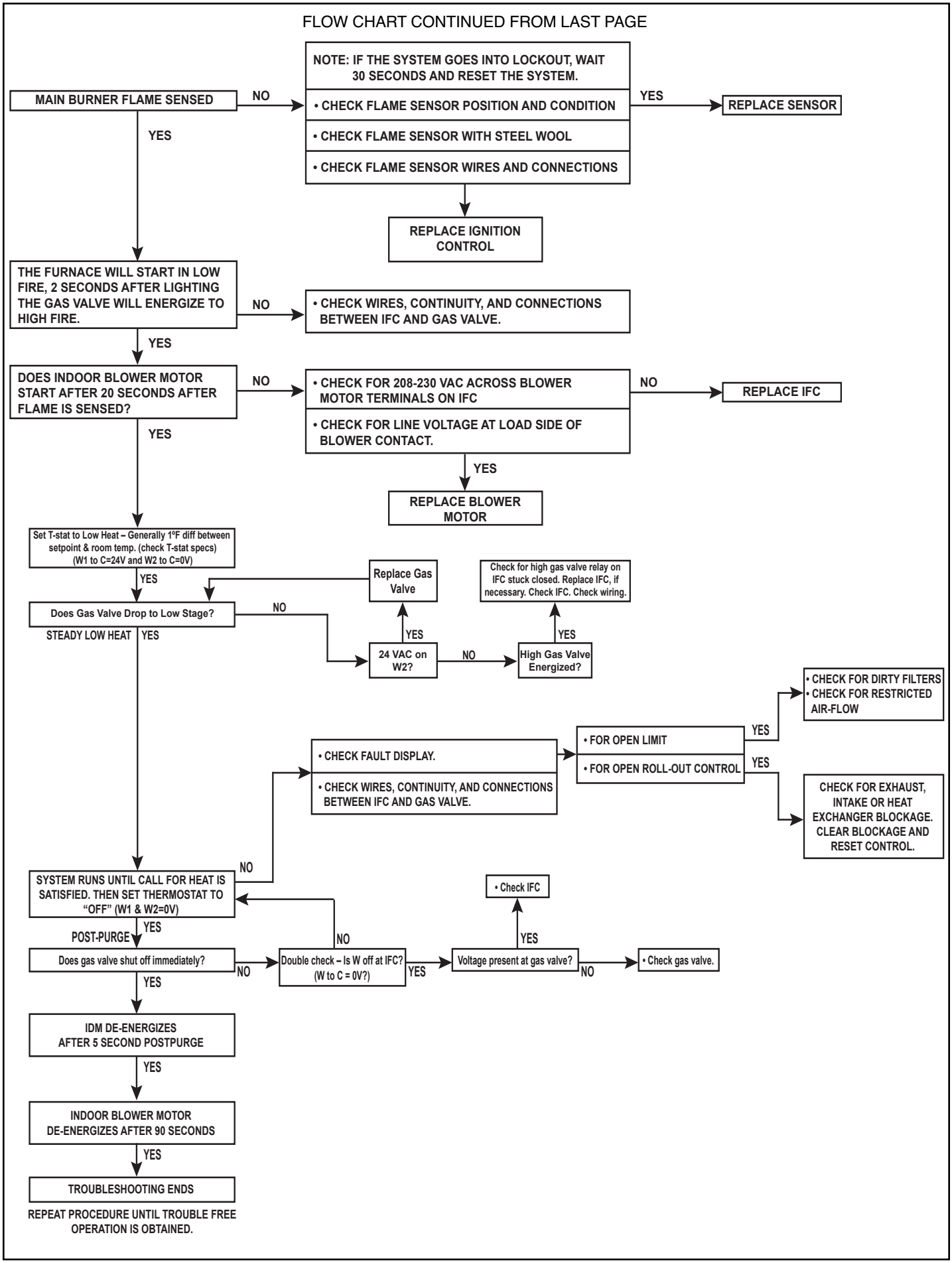
| SYMPTOM | POSSIBLE CAUSE | REMEDY |
|---|---|---|
| Unit will not run | • Power off or loose electrical connection | • Check for correct voltage at compressor contactor in control box |
| | • Thermostat out of calibration-set too high | • Reset |
| | • Failed contactor | • Check for 24 volts at contactor coil - replace if contacts are open |
| | • Blown fuses | • Replace fuses |
| | • Transformer defective | • Check wiring-replace transformer |
| | • High pressure control open (if provided) | • Reset-also see high head pressure remedy-The high pressure control opens at 450 PSIG |
| | • Interconnecting low voltage wiring damaged | • Replace thermostat wiring |
| Condenser fan runs, compressor doesn't | • Loose connection | • Check for correct voltage at compressor - check & tighten all connections |
| | • Compressor stuck, grounded or open motor winding open internal overload. | • Wait at least 2 hours for overload to reset. If still open, replace the compressor. |
| | • Low voltage condition | At compressor terminals, voltage must be within 10% of rating plate volts when unit is operating. |
| | • Low voltage condition | • Add start kit components |
| Insufficient cooling | • Improperly sized unit | • Recalculate load |
| | • Improper airflow | • Check - should be approximately 400 CFM per ton. |
| | • Incorrect refrigerant charge | • Charge per procedure attached to unit service panel. |
| | • Air, non-condensibles or moisture in system | • Recover refrigerant, evacuate & recharge, add filter drier |
| | • Incorrect voltage | • At compressor terminals, voltage must be within 10% of rating plate volts when unit is operating. |
| Compressor short cycles | • Incorrect voltage | • At compressor terminals, voltage must be ± 10% of nameplate marking when unit is operating. |
| | • Defective overload protector | • Replace - check for correct voltage |
| | • Refrigerant undercharge | • Add refrigerant |
| Registers sweat | • Low evaporator airflow | • Increase speed of blower or reduce restriction - replace air filter |
| High head-low vapor pressures | • Restriction in liquid line, expansion device or filter drier | • Remove or replace defective component |
| | • Flow check piston size too small | • Change to correct size piston |
| | • Incorrect capillary tubes | • Change coil assembly |
| | • TXV does not open | • Replace TXV |
| High head-high or normal vapor pressure - Cooling mode | • Dirty condenser coil | • Clean coil |
| | • Refrigerant overcharge | • Correct system charge |
| | • Condenser fan not running | • Repair or replace |
| | • Air or non-condensibles in system | • Recover refrigerant, evacuate & recharge |
| Low head-high vapor pressures | • Defective Compressor valves | • Replace compressor |
| | • Incorrect capillary tubes | • Replace coil assembly |
| Low vapor - cool compressor - iced evaporator coil | • Low evaporator airflow | • Increase speed of blower or reduce restriction - replace air filter |
| | • Operating below 65°F outdoors | • Add Low Ambient Kit |
| | • Moisture in system | • Recover refrigerant - evacuate & recharge - add filter drier |
| High vapor pressure | • Excessive load | • Recheck load calculation |
| | • Defective compressor | • Replace |
| Fluctuating head & vapor pressures | • TXV hunting | • Check TXV bulb clamp - check air distribution on coil - replace TXV |
| | • Air or non-condensibles in system | • Recover refrigerant, evacuate & recharge |
| Gurgle or pulsing noise at expansion device or liquid line | • Air or non-condensibles in system | • Recover refrigerant, evacuate & recharge |

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




FLOW CHART CONTINUED ON NEXT PAGE

FLOW CHART CONTINUED FROM LAST PAGE



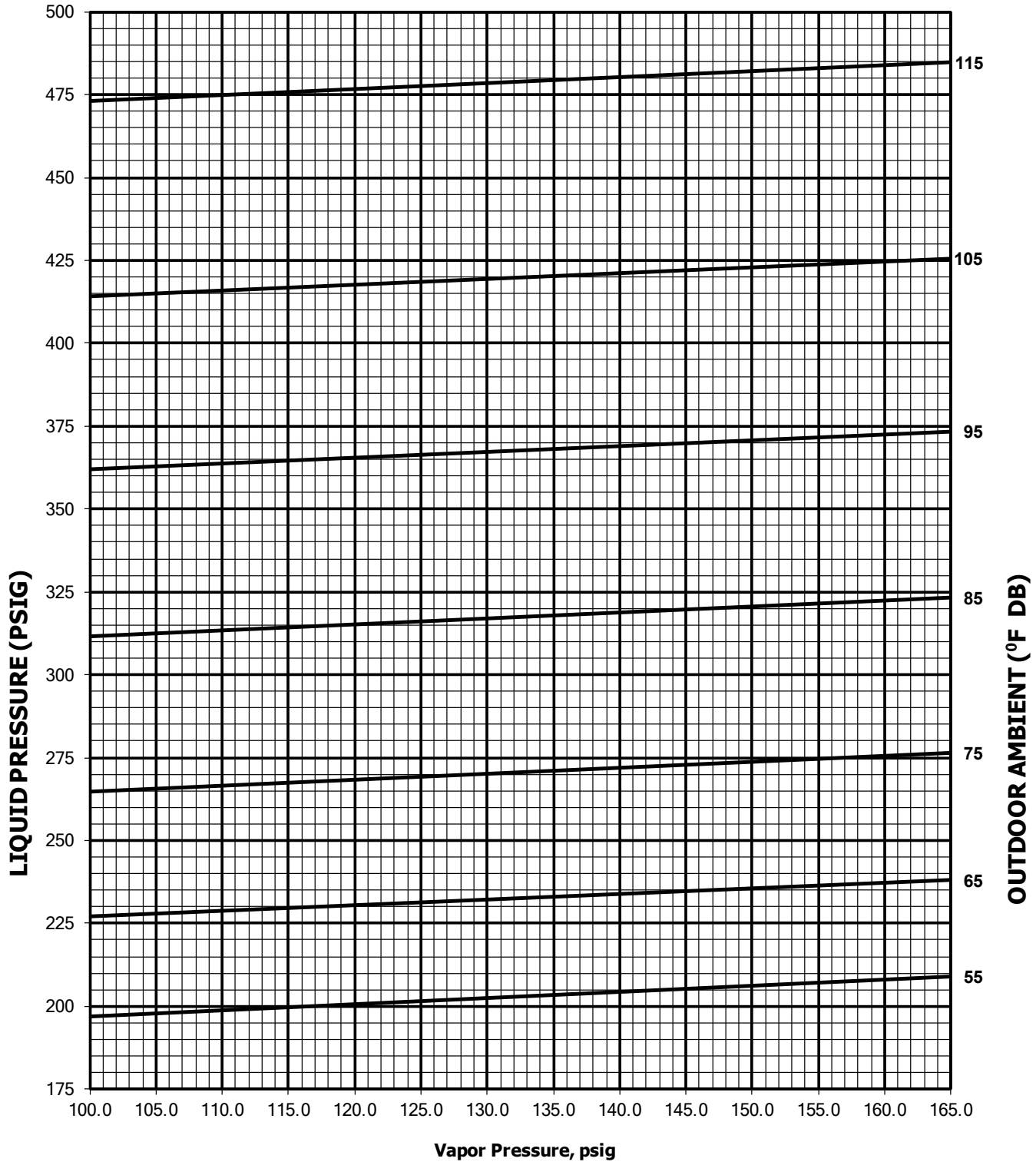
# IFC Alarm Codes

| 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 | CONTINOUS 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 | 2nd 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 | 1st Stage COMBUSTION PRESS SWITCH CLOSED | 2 |
| 46 | 1st Stage COMBUSTION PRESS SWITCH OPEN | 2 |
| 49 | FREEZE SWITCH OPEN – CIRCUIT 1 | 2 |
| 50 | FREEZE SWITCH OPEN – CIRCUIT 2 | 2 |
| 55 | 2nd Stage COMBUSTION PRESS SWITCH CLOSED | 2 |
| 57 | 2nd 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

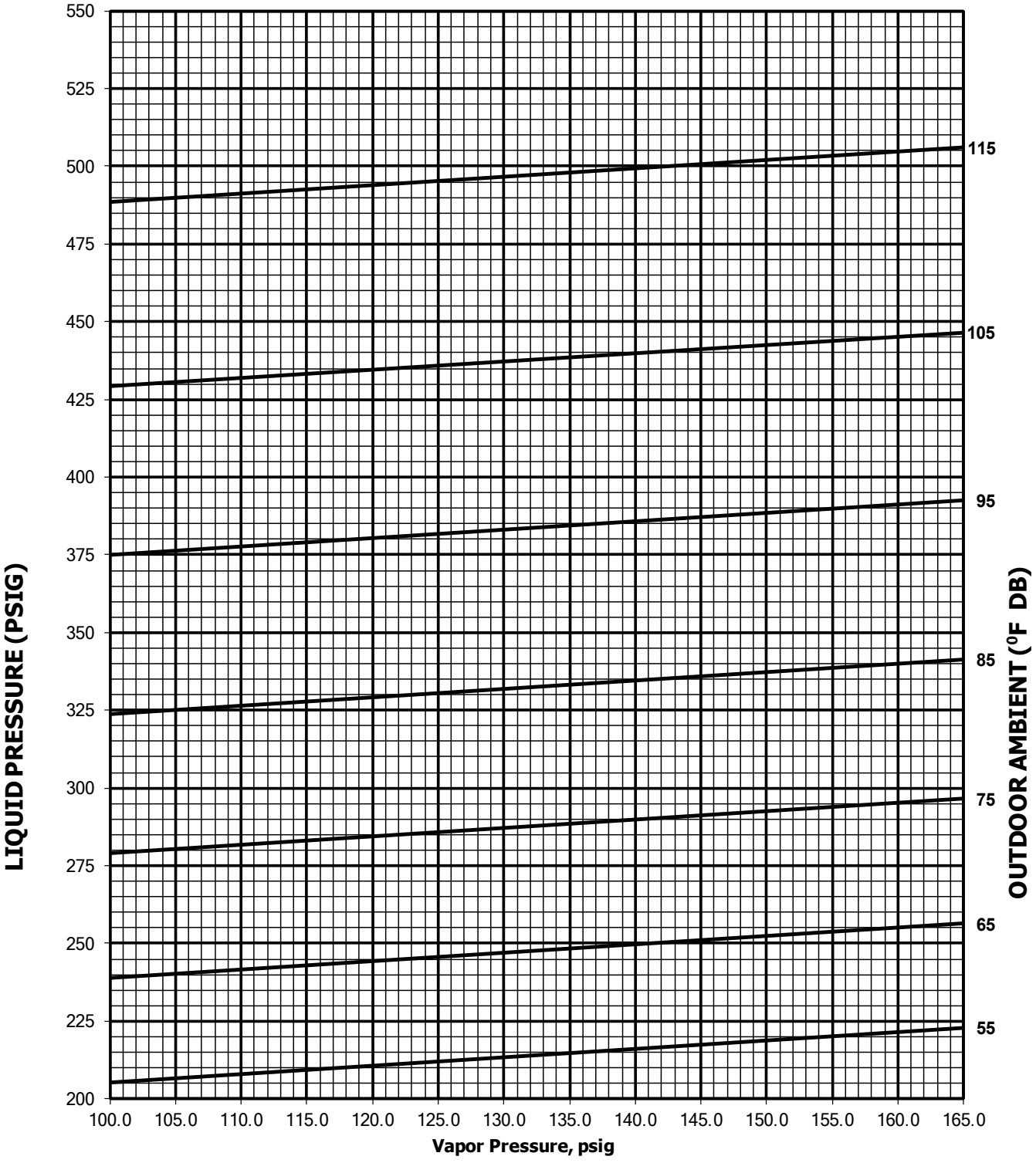



**CAUTION:** **1. RETURN AIR TEMPERATURE MUST BE WITHIN COMFORT CONDITIONS BEFORE FINAL REFRIGERANT CHECK!**

**INSTRUCTIONS:**
**1. MEASURE PRESSURE AT COMPRESSOR SUCTION AND L IOUID.**
**2. MEASURE OUTDOOR AMBIENT TO UNIT.**
**3. PLACE X ON CHART WHERE SUCTION AND LIOUID INTERSECT.**
**4. IF X IS BELOW OUTDOOR AMBIENT L:NE, 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



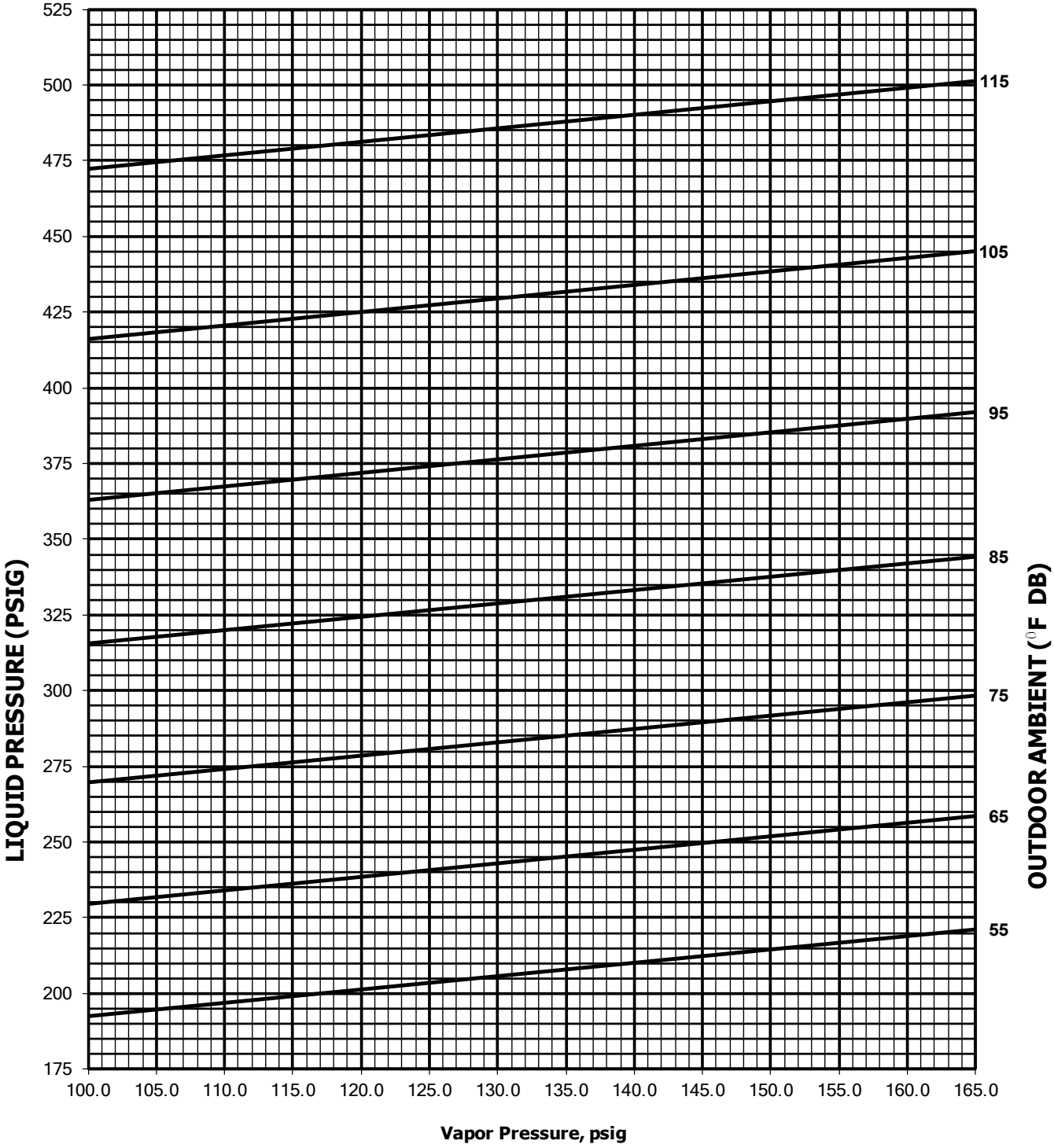

**CAUTION:** **1. RETURN AIR TEMPERATURE MUST BE WITHIN COMFORT CONDITIONS BEFORE FINAL REFRIGERANT CHECK!**

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

92-106138-02-00

SYSTEM CHARGE CHART - REFRIGERANT 410A

10 TON

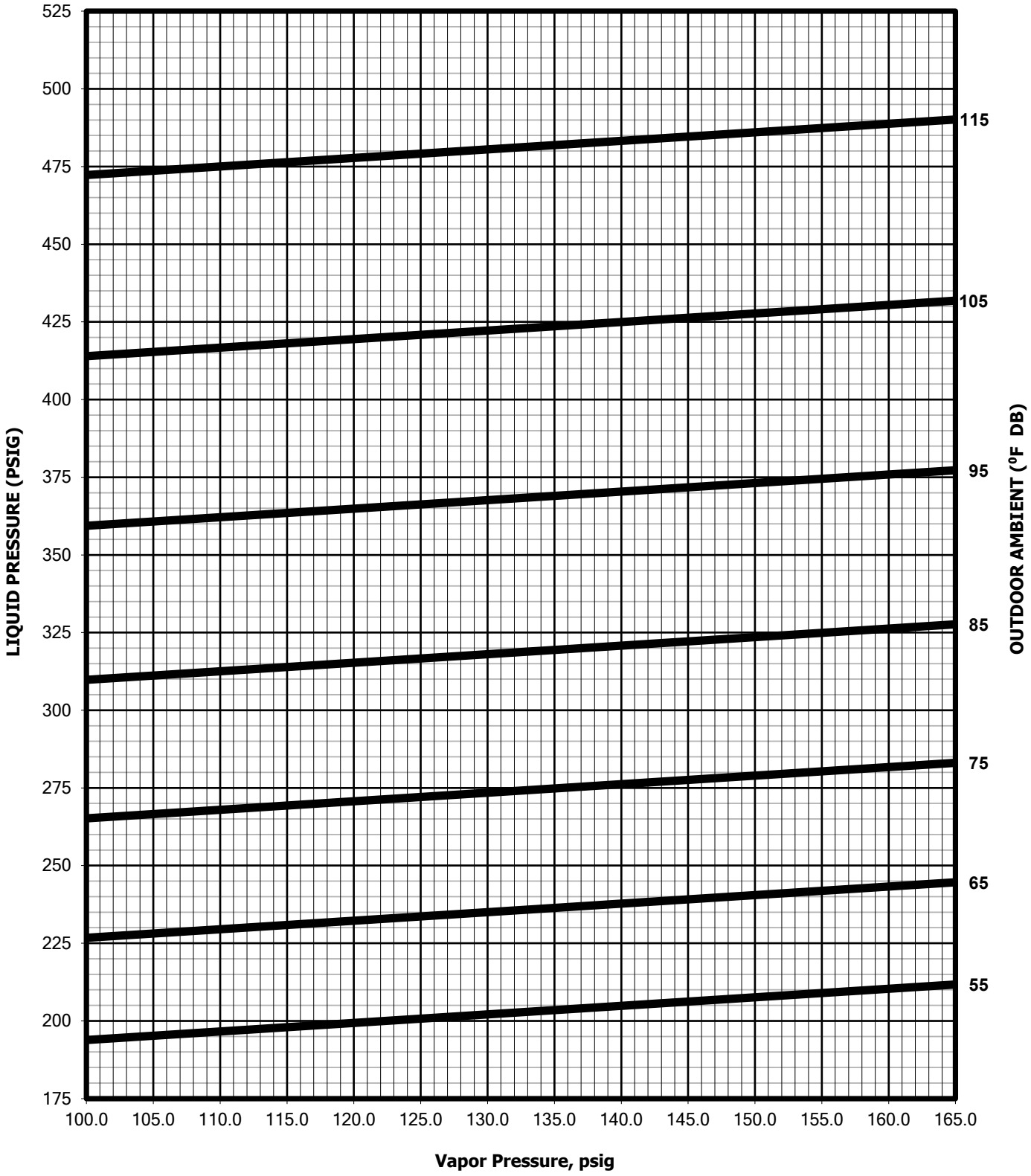



**CAUTION:** **1. RETURN AIR TEMPERATURE MUST BE WITHIN COMFORT CONDITIONS BEFORE FINAL REFRIGERANT CHECK!**

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

92-106138-03-00

# 12.5-Ton AC Charging Chart

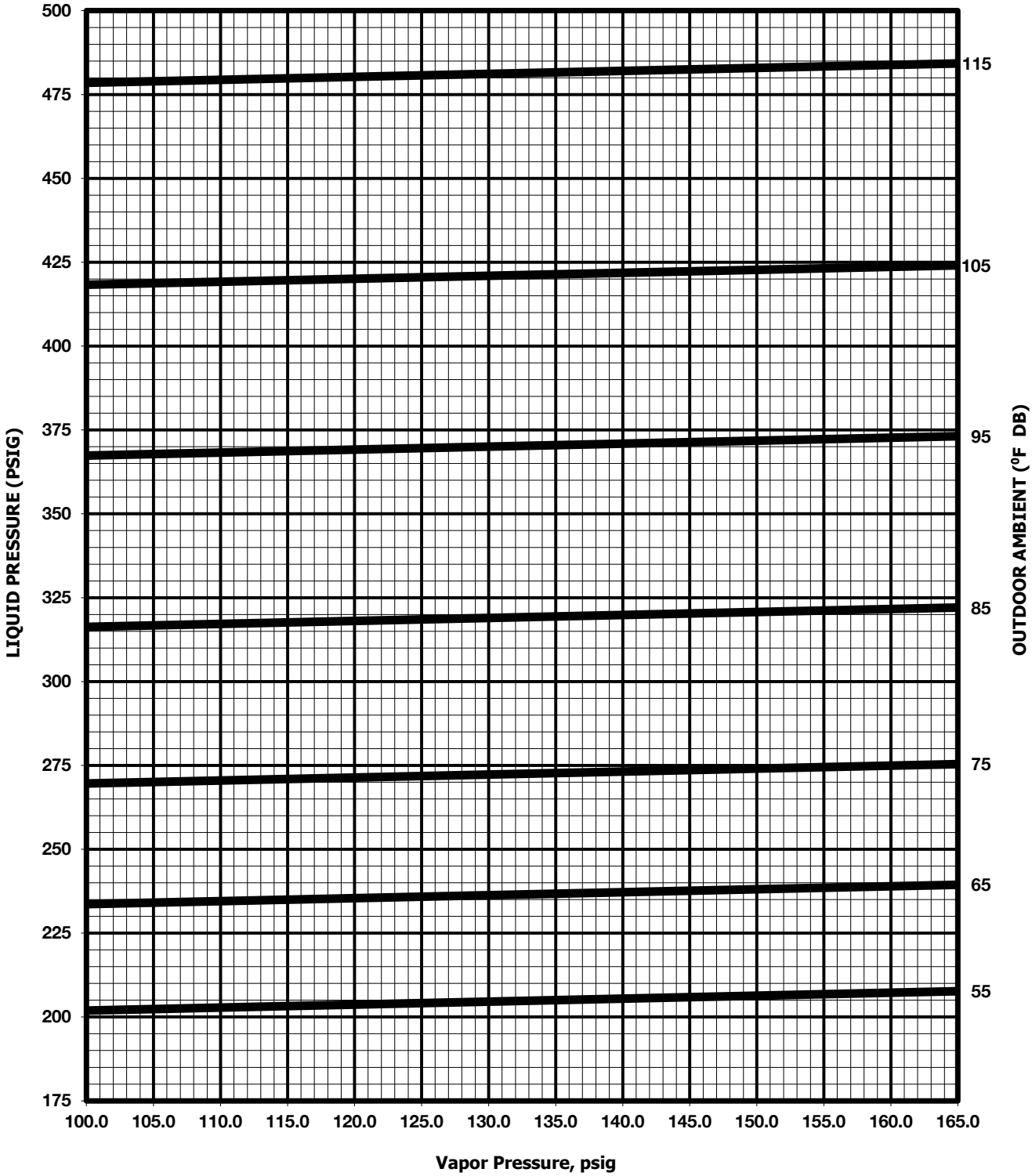



**CAUTION:** 1. RETURN AIR TEMPERATURE MUST BE WITHIN COMFORT CONDITIONS BEFORE FINAL REFRIGERANT CHECK!

**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.**

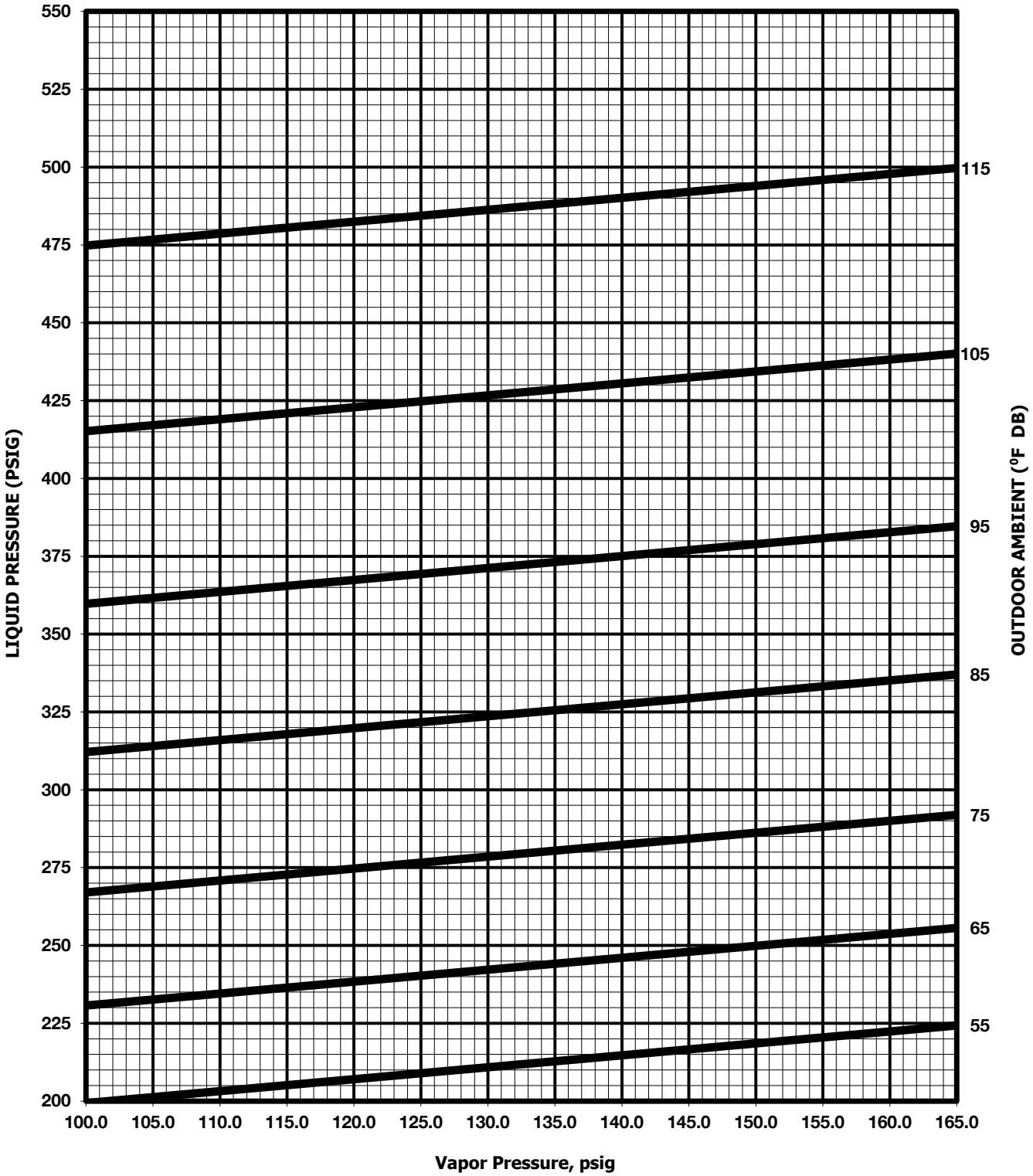
**3. PLACE X ON CHART WHERE SUCTION AND LIQUID INTERSECT.**

**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.**

92-106138-09-0C

# 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.**

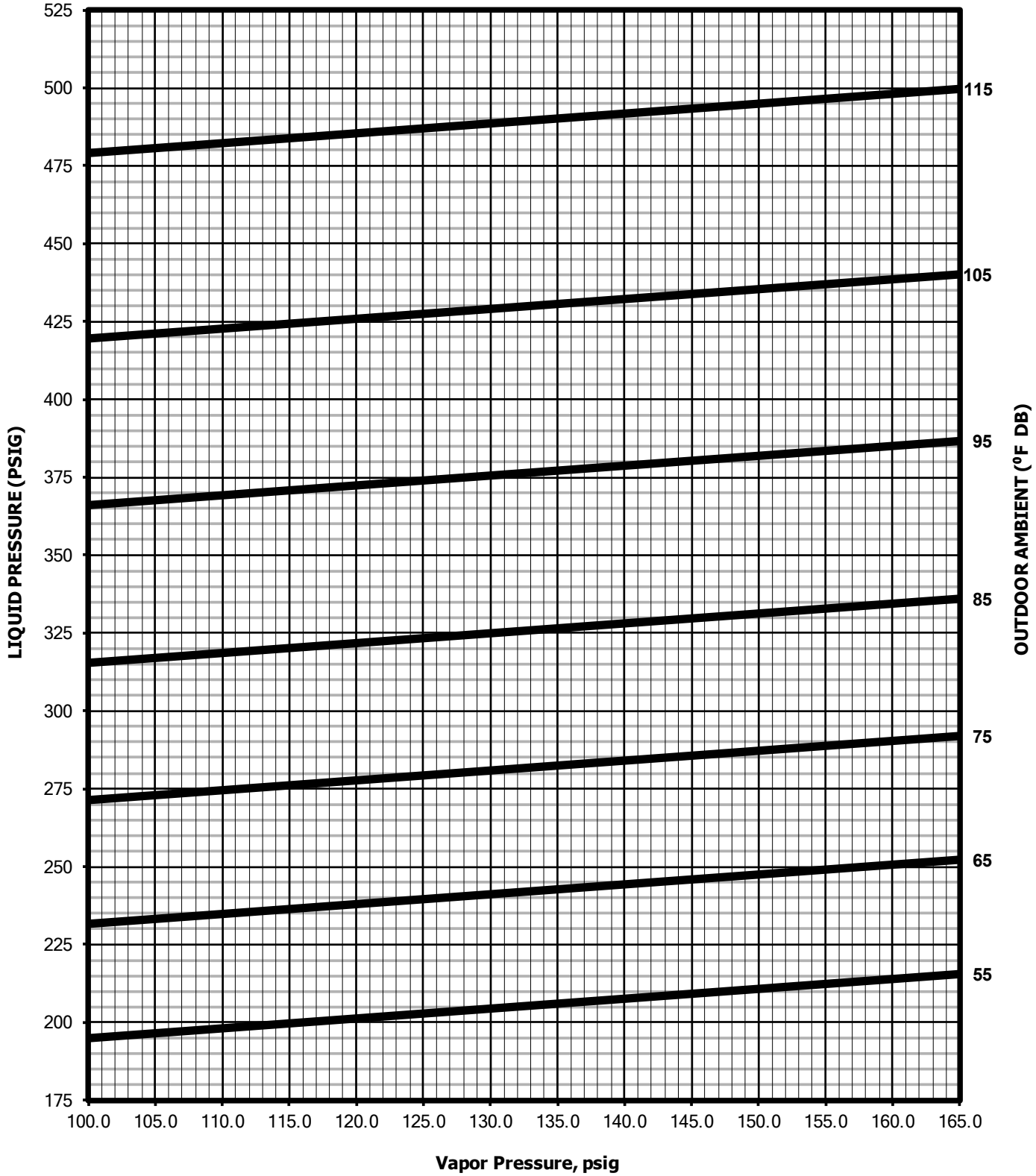
**3. PLACE X ON CHART WHERE SUCTION AND LIQUID INTERSECT.**

**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**

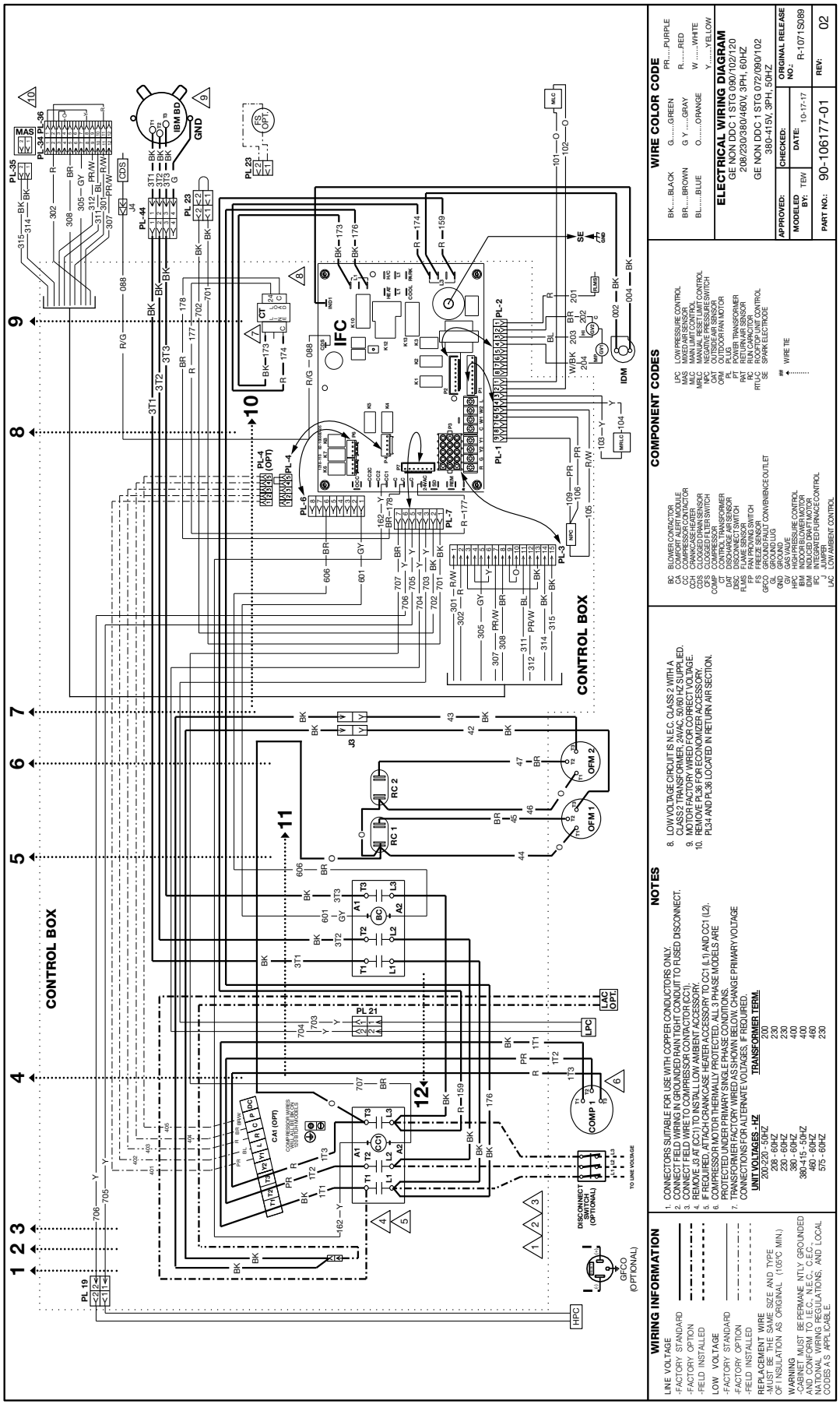

CONTROL BOX
IFC
IDM
COMP 1
OFM 1
OFM 2
RC 1
RC 2
BM
BM BD
GND
HPC
LPC
LAC OPT
CAI (OPT)
DISCONNECT SWITCH (OPTIONAL)
GFCO (OPTIONAL)
TO LINE VOLTAGE
PL 19
PL-35
PL-34
PL-36
PL-44
PL 23
PL-4 (OPT)
PL-6
PL-1
PL-2
PL-7
PL-3
SE
MLC
MLLC
WIRING INFORMATION
LINE VOLTAGE
-FACTORY STANDARD
-FACTORY OPTION
-FIELD INSTALLED
LOW VOLTAGE
-FACTORY STANDARD
-FACTORY OPTION
-FIELD INSTALLED
REPLACEMENT WIRE
-MUST BE THE SAME SIZE AND TYPE OF INSULATION AS ORIGINAL (105°C MIN.)
WARNING
-CABINET MUST BE PERMANENTLY GROUNDED AND CONFORM TO LATEST 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 (CC1).
4. REMOVE J3 AT (CC1) TO INSTALL LOW AMBIENT ACCESSORY.
5. IF REQUIRED, ATTACH CRANKCASE HEATER ACCESSORY TO (CC1 (L1) AND CC1 (L2).
6. COMPRESSOR MOTOR THERMALLY PROTECTED. ALL 3 PHASE MODELS ARE
7. PROTECTED UNDER PRIMARY SINGLE PHASE CONDITIONS.
TRANSFORMER FACTORY WIRED FOR 230V. FIELD CHANGE PRIMARY VOLTAGE CONNECTIONS FOR ALTERNATE VOLTAGES, IF REQUIRED.
UNIT VOLTAGES - HZ / TRANSFORMER TERM.
200-220 - 50HZ 200
208 - 60HZ 230
230 - 60HZ 230
380 - 60HZ 400
380-415 - 50HZ 400
460 - 60HZ 460
575 - 60HZ 230
8. LOW VOLTAGE CIRCUIT IS N.E.C. CLASS 2 WITH A CLASS 2 TRANSFORMER. 24VAC, 50/60 HZ SUPPLIED.
9. MOTOR FACTORY WIRED FOR CORRECT VOLTAGE. REMOVE PL36 FOR ECONOMIZER ACCESSORY.
10. PL34 AND PL36 LOCATED IN RETURN AIR SECTION.
COMPONENT CODES
BC BLOWER CONTACTOR
CAI COMFORT ALERT MODULE
CC COMPRESSOR CONTACTOR
CCH CRANKCASE HEATER
CDS CHANGEOVER SENSOR
CFS CLOGGED FILTER SWITCH
COMP COMPRESSOR
CT CURRENT TRANSFORMER
DAT DISCHARGE AIR SENSOR
EQUIP EQUIPMENT
FU FUSE
GFCO GROUND FAULT CONVENIENCE OUTLET
GL GROUND LUG
GND GROUND
HPC HIGH PRESSURE CONTROL
IBM INDOOR BLOWER MOTOR
IDM INDOOR BLOWER MOTOR
IFC INTEGRATED FURNACE CONTROL
LAT LOW AMBIENT TEMP
LAC LOW AMBIENT CONTROL
LPC LOW PRESSURE CONTROL
MAS MIXED AIR SENSOR
MAT MANUAL ATTCO CONTROL
MRLC MANUAL RESET LIMIT CONTROL
NPC NEGATIVE PRESSURE SWITCH
OAS OUTDOOR AIR SENSOR
OFM OUTDOOR FAN MOTOR
PL PLUG
PT POWER TRANSFORMER
RAT RETURN AIR SENSOR
RC RUN CAPACITOR
RTS ROOM THERMOSTAT
SE SPARK ELECTRODE
## WIRE TIE
WIRE COLOR CODE
BK....BLACK G.....GREEN PR....PURPLE
BR....BROWN G Y.....GRAY R.....RED
BL.....BLUE O.....ORANGE W.....WHITE
Y.....YELLOW
ELECTRICAL WIRING DIAGRAM
GE NON DDC 1 STG 090/102/120
208/230/380/460V, 3PH, 60HZ
GE NON DDC 1 STG 072/090/102
380-415V, 3PH, 50HZ
APPROVED: CHECKED: ORIGINAL RELEASE NO.: R-10715089
MODELED BY: TEW DATE: 10-17-17
PART NO.: 90-106177-01 REV: 02

**FIGURE 22**

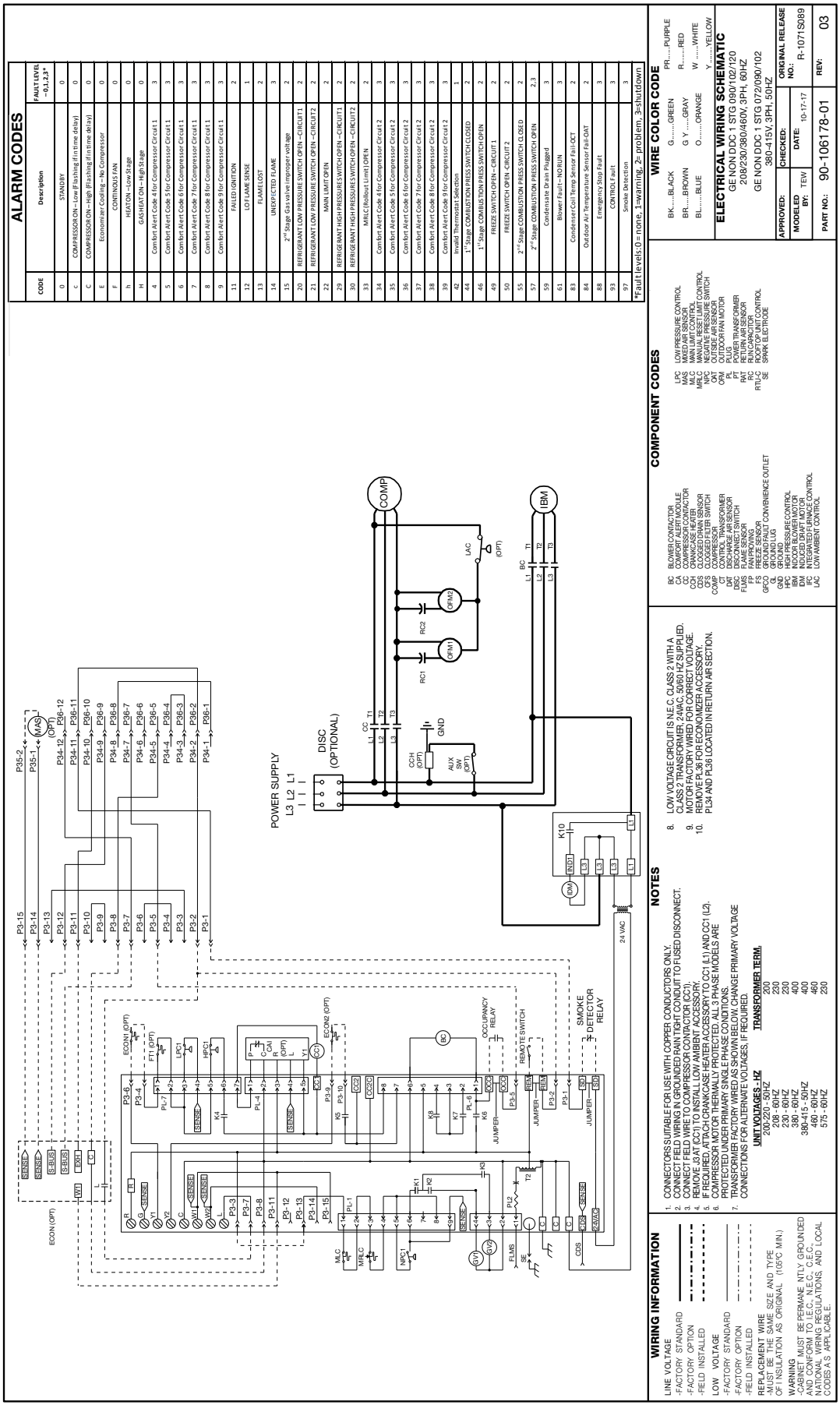

ALARM CODES
CODE
Description
FAULT LEVEL -0,1,2,3*
0 STANDBY 0
C COMPRESSOR – Low Flashing (First time delay) 0
C COMPRESSOR – High Flashing (Runtime delay) 0
E Economizer Cooling – No Compressor 0
F CONTINUOUS FAN 0
h HEATON – Low Stage 0
H EOGHEATON – High Stage 0
4 Comfort Alert Code 4 for Compressor 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 LOT LAME SENSE 1
13 FLAME LOST 2
14 UNEXPECTED FLAME 3
15 2nd Stage Gas valve improper voltage 2
20 REFRIGERANT LOW PRESSURE SWITCH OPEN –CIRCUIT1 2
21 REFRIGERANT LOW PRESSURE SWITCH OPEN –CIRCUIT2 2
22 MAIN LIMIT OPEN 2
29 REFRIGERANT HIGH PRESSURES WITCH OPEN –CIRCUIT1 2
30 REFRIGERANT HIGH PRESSURES WITCH OPEN –CIRCUIT2 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 1st Stage COMBUSTION PRESS SWITCH CLOSED 2
46 1st Stage COMBUSTION PRESS SWITCH OPEN 2
49 FREEZE SWITCH OPEN –CIRCUIT 1 2
50 FREEZE SWITCH OPEN –CIRCUIT 2 2
55 2nd Stage COMBUSTION PRESS SWITCH CLOSED 2
57 2nd 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
COMPONENT CODES
BC BLOWER CONTACTOR
CSA COMFORT ALERT MODULE
CC COMPRESSOR CONTACTOR
CCH CRANKCASE HEATER
CDTS CLOGGED DRAIN SENSOR
CDS CLOGGED DRAIN SWITCH
COMP COMPRESSOR
CT CONTROL TRANSFORMER
DFM DOWNFLOW FAN MOTOR
DISC DISCONNECT SWITCH
FLAMS FLAME SENSOR
FS FREEZE SENSOR
GFCO GROUND FAULT CONVENIENCE OUTLET
GJ FIELD JUMPER
GND GROUND
HPC HIGH PRESSURE CONTROL
IDM INDUCED DRAFT MOTOR
IFC INTEGRATED FURNACE CONTROL
LAC LOW AMBIENT CONTROL
LPC LOW PRESSURE CONTROL
MAS MERCURY SENSOR
MLC MAIN LIMIT CONTROL
MRLC MANUAL RESET LIMIT CONTROL
NPS NAVIEN PRESSURE SWITCH
OAT OUTSIDE AIR SENSOR
OFM OUTDOOR FAN MOTOR
PL PLUG
PT POWER TRANSFORMER
RAT RETURN AIR SENSOR
RC RUN CAPACITOR
RTU-C ROOFTOP UNIT CONTROL
SE SPARK ELECTRODE
WIRE COLOR CODE
BK.....BLACK G.....GREEN PR.....PURPLE
BR.....BROWN G Y.....GRAY R.....RED
BL.....BLUE O.....ORANGE W.....WHITE
Y.....YELLOW
ELECTRICAL WIRING SCHEMATIC
GE NON DDC 1 STG 090/102/120
208/230/380/460V, 3PH, 60HZ
GE NON DDC 1 STG 072/090/102
380-415V, 3PH, 50HZ
APPROVED: CHECKED: ORIGINAL RELEASE NO.: R-1071S089
MODELED BY: TEW DATE: 10-17-17
PART NO.: 90-106178-01 REV: 03
WIRING INFORMATION
LINE VOLTAGE
-FACTORY STANDARD
-FACTORY OPTION
-FIELD INSTALLED
LOW VOLTAGE
-FACTORY STANDARD
-FACTORY OPTION
-FIELD INSTALLED
REPLACEMENT WIRE
-MUST BE THE SAME SIZE AND TYPE OF INSULATION AS ORIGINAL (105°C MIN.)
WARNING
-CABINET MUST BE PERMANENTLY GROUNDED AND CONFORM TO LE.C., N.E.C., O.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 WIRES TO COMPONENTS AS SHOWN (OPT).
4. REMOVE JUMPER TO INSTALL LOW AMBIENT ACCESSORY.
5. IF REQUIRED, ATTACH CRANKCASE HEATER ACCESSORY TO CC1 (L1) AND CC1 (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 CONNECTIONS FOR ALTERNATE VOLTAGES, IF REQUIRED.
UNIT VOLTAGES - HZ TRANSFORMER TERM.
200-220 - 50HZ 200
208 - 60HZ 230
230 - 60HZ 230
380 - 50HZ 400
380-415 - 50HZ 400
460 - 60HZ 460
575 - 60HZ 230
8. LOW VOLTAGE CIRCUIT IS N.E.C. CLASS 2 WITH A CLASS 2 TRANSFORMER, 24VAC, 50/60 HZ SUPPLIED.
9. MOTOR FACTORY WIRED FOR CORRECT VOLTAGE.
10. REMOVE PL36 FOR ECONOMIZER ACCESSORY. PL34 AND PL36 LOCATED IN RETURN AIR SECTION.
POWER SUPPLY
L3 L2 L1
DISC (OPTIONAL)
COMP
IBM
OFM1
OFM2
RC1
RC2
LAC
GND
CCH (OPT)
AUX SW (OPT)
K10
24 VAC
ECON (OPT)
MLC
MRLC
LPC1
HPC1
PL1-1
PL1-7
PL2
FLMS
SE
CDS
GV
OCCUPANCY RELAY
REMOTE SWITCH
SMOKE DETECTOR RELAY
JUMPER
ECON1 (OPT)
ECON2 (OPT)
FTL (OPT)
P3-15
P3-14
P3-13
P3-12
P3-11
P3-10
P3-9
P3-8
P3-7
P3-6
P3-5
P3-4
P3-3
P3-2
P3-1
P35-2
P35-1
(MAS) (OPT)
P34-12
P34-11
P34-10
P34-9
P34-8
P34-7
P34-6
P34-5
P34-4
P34-3
P34-2
P34-1
P36-12
P36-11
P36-10
P36-9
P36-8
P36-7
P36-6
P36-5
P36-4
P36-3
P36-2
P36-1

**FIGURE 23**

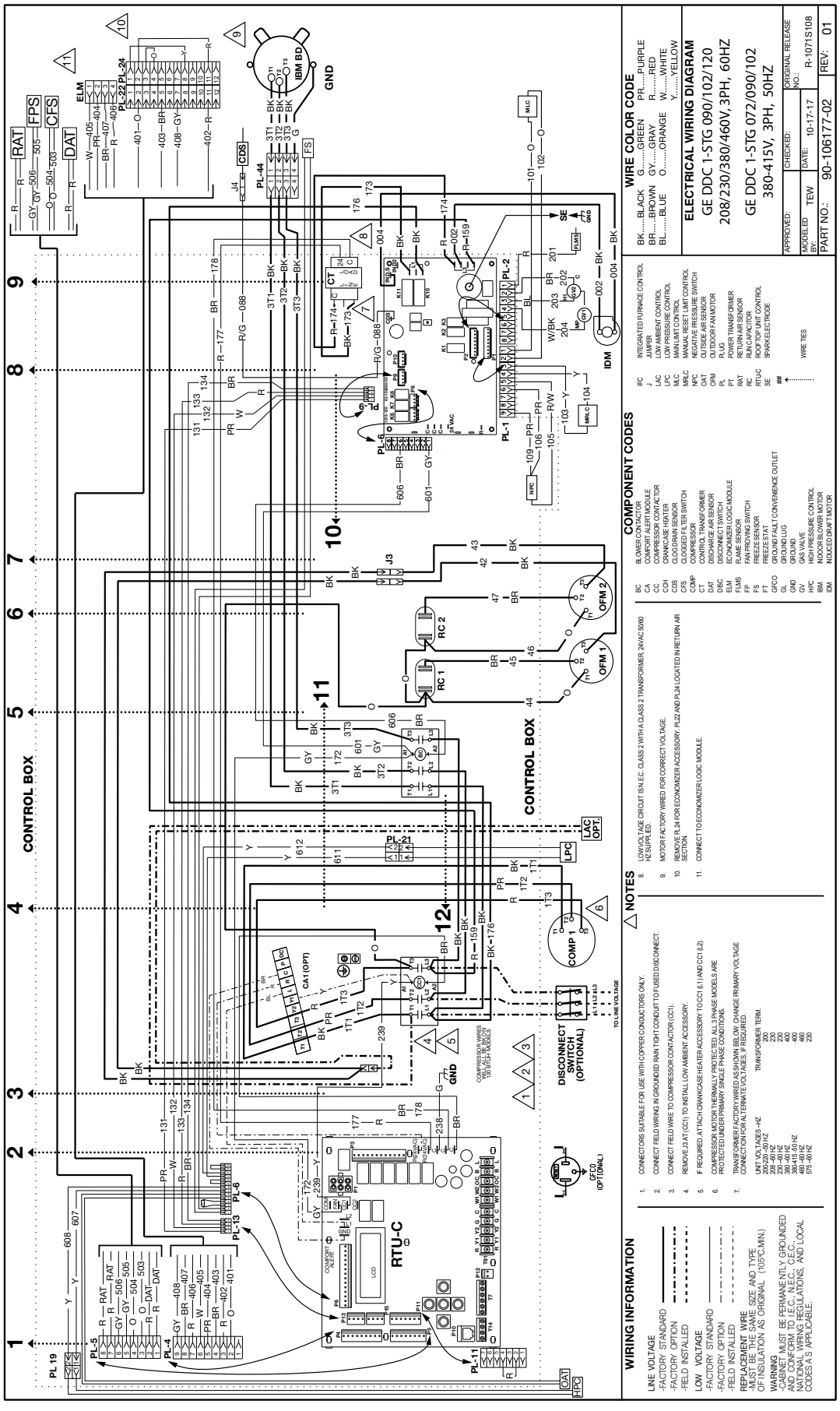
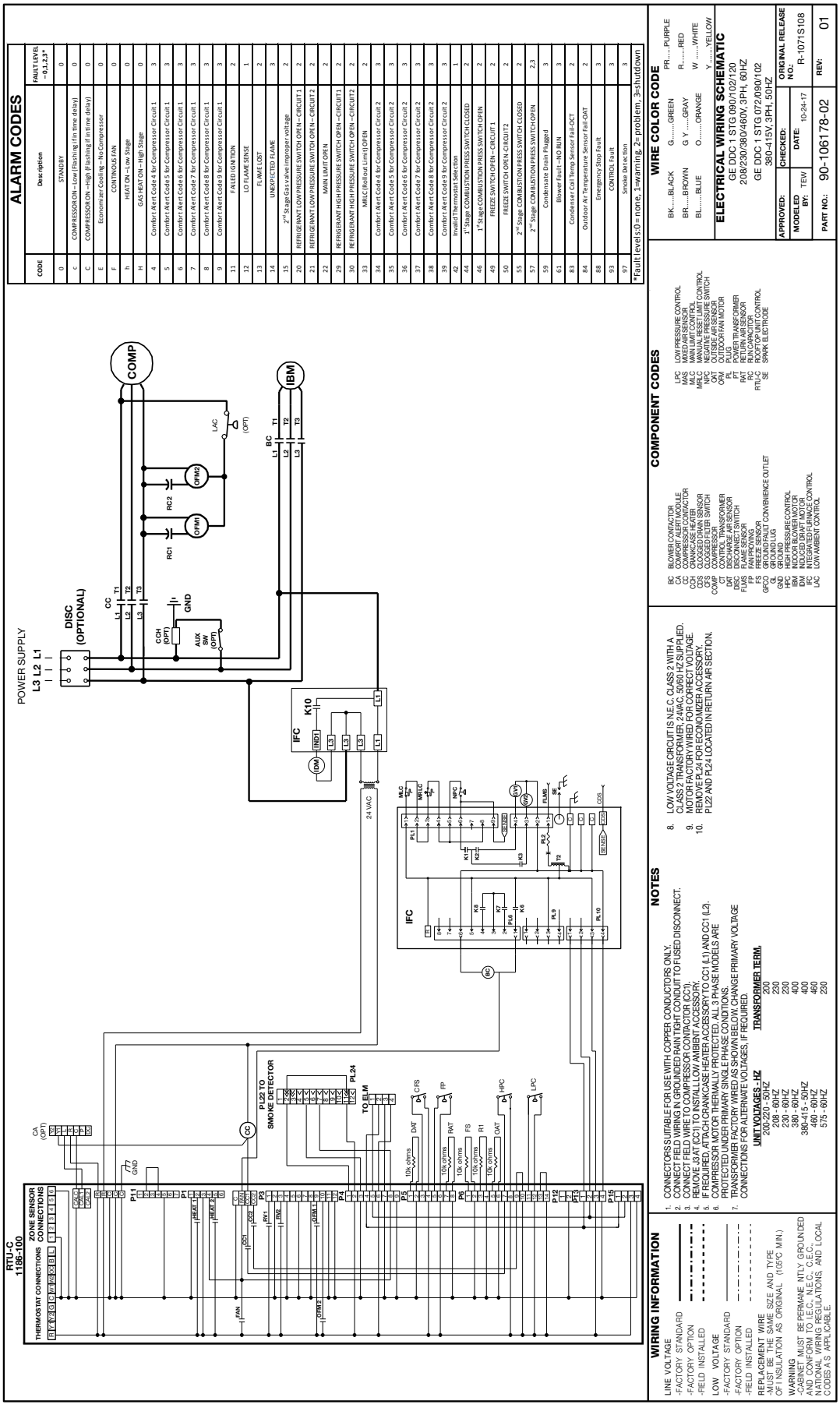

CONTROL BOX
WIRING INFORMATION
NOTES
COMPONENT CODES
WIRE COLOR CODE
ELECTRICAL WIRING DIAGRAM
GE DDC 1-STG 090/102/120
208/230/380/460V, 3PH, 60HZ
GE DDC 1-STG 072/090/102
380-415V, 3PH, 50HZ
PART NO: 90-106177-02
REV: 01
RTU-C
IDM
IBM BD
GND
RAT
FPS
CFS
DAT
OAT
RPC
OFM 1
OFM 2
RC 1
RC 2
COMP 1
LPC
LAC OPT
CA1 (OPT)
DISCONNECT SWITCH (OPTIONAL)
GFCI (OPTIONAL)

**FIGURE 24**




| 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 | HEATON – 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 | 2nd 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 | 1st Stage COMBUSTION PRESS SWITCH CLOSED | 2 |
| 46 | 1st Stage COMBUSTION PRESS SWITCH OPEN | 2 |
| 49 | FREEZE SWITCH OPEN – CIRCUIT 1 | 2 |
| 50 | FREEZE SWITCH OPEN – CIRCUIT 2 | 2 |
| 55 | 2nd Stage COMBUSTION PRESS SWITCH CLOSED | 2 |
| 57 | 2nd 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 Level: 0 = none, 1=warning, 2= problem, 3=shutdown

| | |
|---|---|
| BC | BLOWER CONTACTOR |
| CA | COMFORT ALERT MODULE |
| CC | COMPRESSOR CONTACTOR |
| CCH | CRANKCASE HEATER |
| CFB | CLOGGED DRAIN SENSOR |
| CFS | CLOGGED DRAIN SWITCH |
| COMP | COMPRESSOR |
| CT | CONTROL TRANSFORMER |
| DISC | DISCONNECT SWITCH |
| FLMS | FLAME SENSOR |
| FS | FREEZE SENSOR |
| GFCO | GROUND FAULT CONVENIENCE OUTLET |
| GND | GROUND LUG |
| GND | GROUND |
| HPC | HIGH PRESSURE CONTROL |
| IBM | INDOOR BLOWER MOTOR |
| IDM | INDUCED DRAFT MOTOR |
| IFC | INTEGRATED FURNACE CONTROL |
| LAC | CONTACTOR LOW AMBIENT CONTROL |
| LPC | LOW PRESSURE CONTROL |
| MAS | MERCURY AIR SENSOR |
| MLC | MAIN LIMIT CONTROL |
| MRLC | MANUAL RESET LIMIT CONTROL |
| NPC | NORMAL PRESSURE SWITCH |
| OAT | OUTSIDE AIR SENSOR |
| OPM | OUTDOOR FAN MOTOR |
| PL | PLUG |
| PT | POWER TRANSFORMER |
| RAT | RETURN AIR SENSOR |
| RC | RUN CAPACITOR |
| RTU-C | ROOFTOP UNIT CONTROL |
| SE | SPARK ELECTRODE |

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

**WIRING INFORMATION**

LINE VOLTAGE
-FACTORY STANDARD
-FACTORY OPTION
-FIELD INSTALLED

LOW VOLTAGE
-FACTORY STANDARD
-FACTORY OPTION
-FIELD INSTALLED

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

WARNING
-CABINET MUST BE PERMANENTLY GROUNDED AND CONFORM TO LE.C., N.E.C., O.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 WIRES TO COMPONENT CONTACTOR COIL.
4. REMOVE JUMPER J3 AT CC(T1) TO INSTALL LOW AMBIENT ACCESSORY.
5. IF REQUIRED, ATTACH CRANKCASE HEATER ACCESSORY TO CC1 (L1) AND CC1 (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 CONNECTIONS FOR ALTERNATE VOLTAGES, IF REQUIRED.

| UNIT VOLTAGES - HZ | TRANSFORMER TERM. |
|---|---|
| 200-220 - 50HZ | 200 |
| 208 - 60HZ | 230 |
| 230 - 60HZ | 230 |
| 380 - 60HZ | 400 |
| 380-415 - 50HZ | 400 |
| 460 - 60HZ | 460 |
| 575 - 60HZ | 230 |

8. LOW VOLTAGE CIRCUIT IS N.E.C. CLASS 2 WITH A CLASS 2 TRANSFORMER, 24VAC, 50/60 HZ SUPPLIED.
9. MOTOR FACTORY WIRED FOR CORRECT VOLTAGE.
10. REMOVE PL24 FOR ECONOMIZER ACCESSORY. PL22 AND PL24 LOCATED IN RETURN AIR SECTION.

**FIGURE 25**

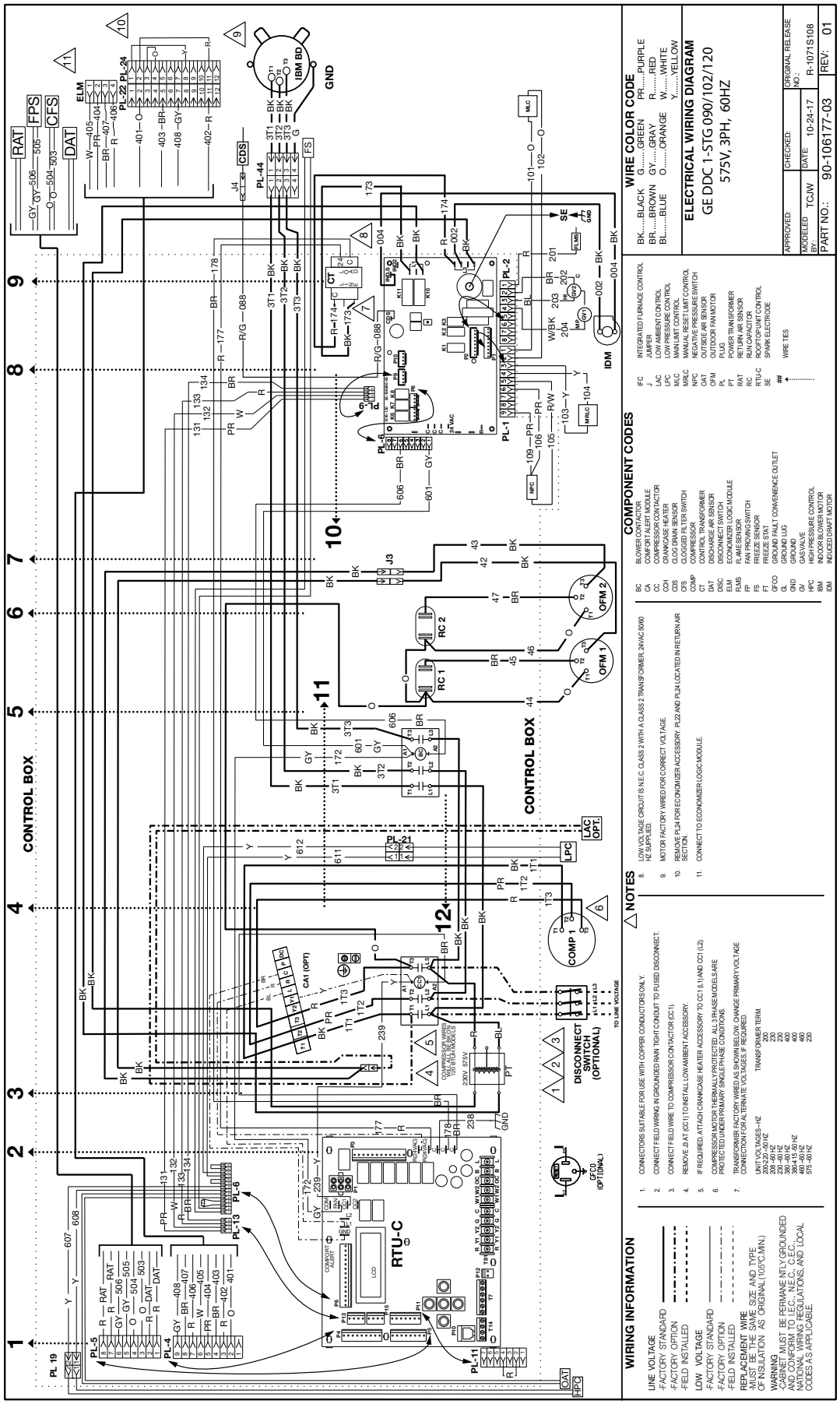

ELECTRICAL WIRING DIAGRAM
GE DDC 1-STG 090/102/120
575V, 3PH, 60HZ
PART NO.: 90-106177-03
REV: 01
WIRE COLOR CODE
BK....BLACK G.....GREEN PR....PURPLE
BR....BROWN GY....GRAY R.....RED
BL....BLUE O.....ORANGE W.....WHITE
Y.....YELLOW
COMPONENT CODES
NOTES
WIRING INFORMATION
CONTROL BOX
RTU-C
IDM
IBM BD
GND
RAT
FPS
CFS
DAT
ELM
PL-24
CDS
SE
OFM 1
OFM 2
RC 1
RC 2
COMP 1
LPC
LAC OPT.
DISCONNECT SWITCH (OPTIONAL)
CA1 (OPT)
OAT
HPC

**FIGURE 26**

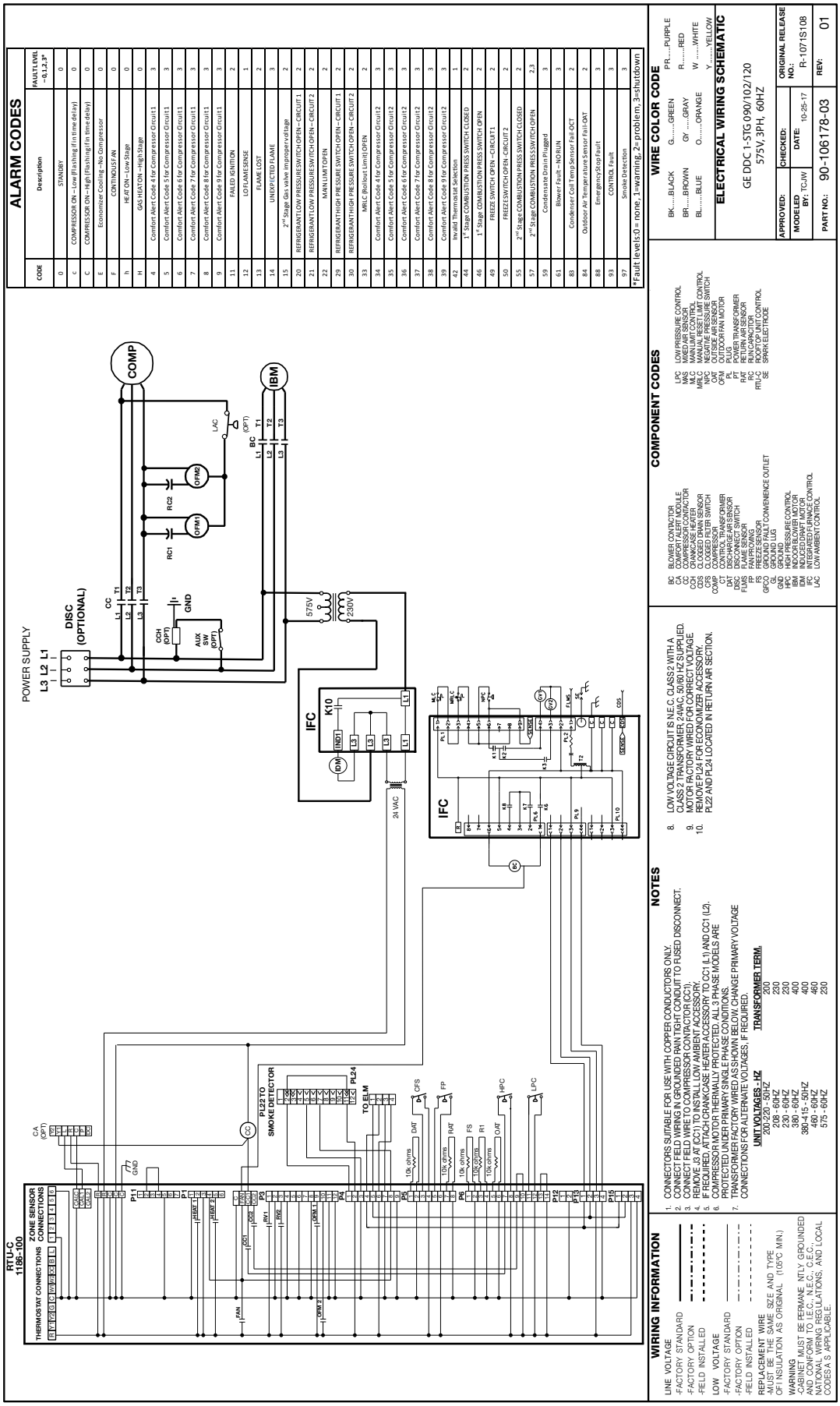
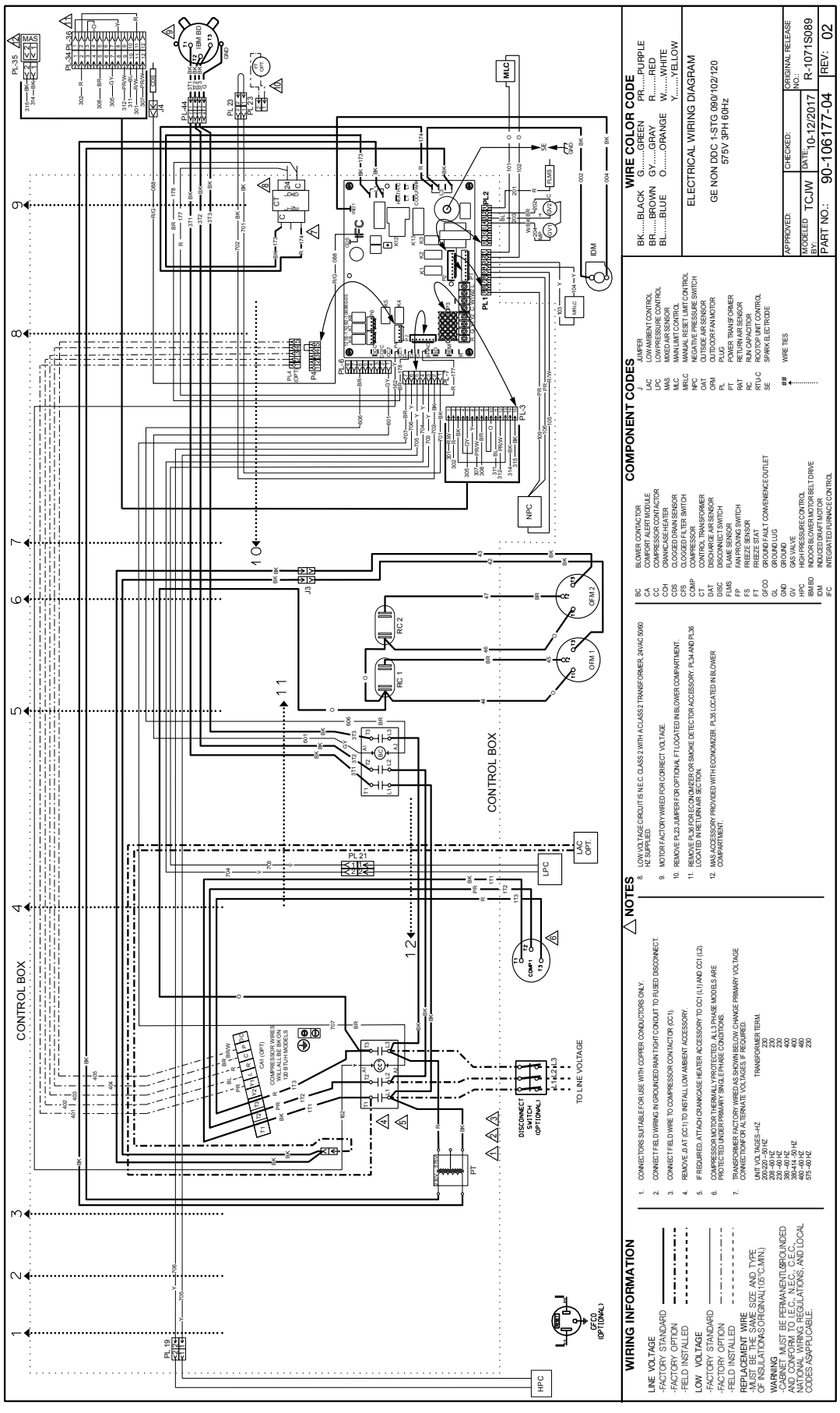
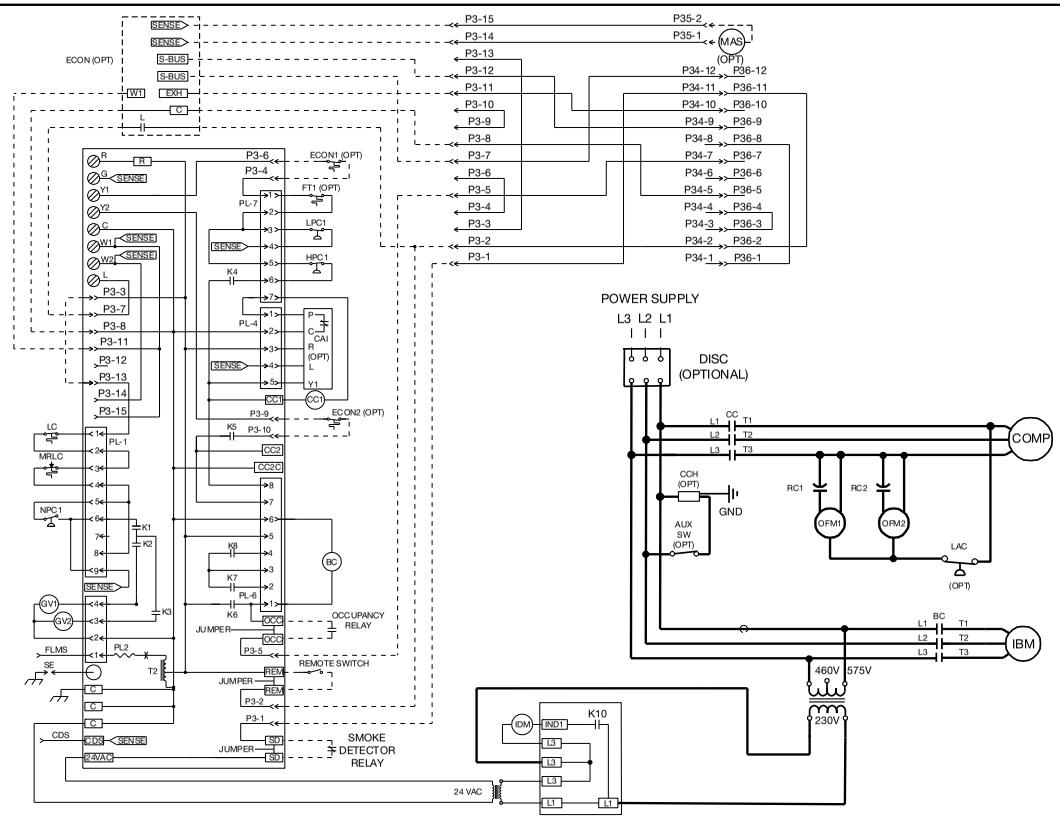

ALARM CODES
CODE
Description
FAULT LEVEL -0,1,2,3*
0 STANDBY 0
C COMPRESSOR ON – Low (Flashing if in time delay) 0
C COMPRESSOR ON – High (Flashing if in time delay) 0
E Economizer Cooling –No Compressor 0
F CONTINOUS FAN 0
h HEAT ON – Low Stage 0
H GAS HEATON – High Stage 0
4 Comfort Alert Code 4 for Compressor Circuit1 3
5 Comfort Alert Code 5 for Compressor Circuit1 3
6 Comfort Alert Code 6 for Compressor Circuit1 3
7 Comfort Alert Code 7 for Compressor Circuit1 3
8 Comfort Alert Code 8 for Compressor Circuit1 3
9 Comfort Alert Code 9 for Compressor Circuit1 3
11 FAILED IGNITION 2
12 LO FLAME SENSE 1
13 FLAME LOST 2
14 UNEXPECTED FLAME 3
15 2nd 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 1st Stage COMBUSTION PRESS SWITCH CLOSED 2
46 1st Stage COMBUSTION PRESS SWITCH OPEN 2
49 FREEZE SWITCH OPEN – CIRCUIT1 2
50 FREEZE SWITCH OPEN –CIRCUIT 2 2
55 2nd Stage COMBUSTION PRESS SWITCH CLOSED 2
57 2nd 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
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 1-STG 090/102/120
575V, 3PH, 60HZ
APPROVED:
CHECKED:
ORIGINAL RELEASE NO.:
MODEL ID: BY:, TC,W
DATE: 10-25-17
R-1071S108
PART NO.: 90-106178-03
REV: 01
COMPONENT CODES
BC BLOWER CONTACTOR
CA COMFORT ALERT MODULE
CC COMPRESSOR CONTACTOR
CCH CRANKCASE HEATER
CDFS CLOGGED DRAIN SENSOR
CFS CLOGGED FILTER SWITCH
COMP COMPRESSOR
CT CONTROL TRANSFORMER
DAT DISCHARGE AIR SENSOR
DISC DISCONNECT SWITCH
FLARS FLAME SENSOR
FP FREEZE SENSOR
FS FREEZE SENSOR
GFCO GROUND FAULT CONVENIENCE OUTLET
GND GROUND LUG
GND GROUND
HPC HIGH PRESSURE CONTROL
IBM INDUCED DRAFT MOTOR
IFC INTEGRATED FURNACE CONTROL
LAC LOW AMBIENT CONTROL
LPC LOW PRESSURE CONTROL
MRLC MANUAL RESET LIMIT CONTROL
MRLC MANUAL RESET LIMIT SWITCH
OAT OUTSIDE AIR SENSOR
OFM OUTDOOR FAN MOTOR
PL PLUG
PT POWER TRANSFORMER
RAT RETURN AIR SENSOR
RTU-C ROOFTOP UNIT CONTROL
SE SPARK ELECTRODE
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 (CC).
4. REMOVE JUMPER WIRE TO INSTALL LOW AMBIENT ACCESSORY.
5. IF REQUIRED, ATTACH CRANKCASE HEATER ACCESSORY TO CC1 (L1) AND CC1 (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 CONNECTIONS FOR ALTERNATE VOLTAGES. IF REQUIRED.
UNIT VOLTAGES - HZ TRANSFORMER TERM.
200-220 - 50HZ 200
208 - 60HZ 230
230 - 60HZ 230
380 - 60HZ 400
380-415 - 50HZ 400
460 - 60HZ 460
575 - 60HZ 230
8. LOW VOLTAGE CIRCUIT IS N.E.C. CLASS 2 WITH A CLASS 2 TRANSFORMER, 24VAC, 50/60 HZ SUPPLIED.
9. MOTOR FACTORY WIRED FOR CORRECT VOLTAGE
10. REMOVE PL24 FOR ECONOMIZER ACCESSORY. PL22 AND PL24 LOCATED IN RETURN AIR SECTION.
WIRING INFORMATION
LINE VOLTAGE
-FACTORY STANDARD
-FACTORY OPTION
-FIELD INSTALLED
LOW VOLTAGE
-FACTORY STANDARD
-FACTORY OPTION
-FIELD INSTALLED
REPLACEMENT WIRE
-MUST BE THE SAME SIZE AND TYPE OF INSULATION AS ORIGINAL (105°C MIN.)
WARNING
-CABINET MUST BE PERMANENTLY GROUNDED AND CONFORM TO LE.C., N.E.C., O.E.C., NATIONAL WIRING REGULATIONS, AND LOCAL CODES AS APPLICABLE.
RTU-C 1186-100
ZONE SENSOR CONNECTIONS
THERMOSTAT CONNECTIONS
POWER SUPPLY
L3 L2 L1
DISC (OPTIONAL)
CC
CCH (OPT)
AUX SW (OPT)
GND
RC1
RC2
COMP
CPHM1
CPHM2
LAC
IBM
IFC
K10
575V
230V
24 VAC
PL22 TO SMOKE DETECTOR
TO ELM
PL24
CA (OPT)
FAN
CFS
DAT
FP
RAT
FS
R1
OAT
HPC
LPC
CDS

**FIGURE 27**


CONTROL BOX
CONTROL BOX
TO LINE VOLTAGE
DISCONNECT SWITCH (OPTIONAL)
GFCI (OPTIONAL)
HPC
LPC
NPC
MLC
IDM
IFC
OFM 1
OFM 2
RC 1
RC 2
PT
COMP
IBM BD
LAC OPT.
PL 19
PL 21
PL 23
PL 34
PL 35
PL 44
PL 6
PL 7
PL 1
PL 2
PL 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 DIAGRAM
GE NON DDC 1-STG 090/102/120
575V 3PH 60Hz
APPROVED:
CHECKED:
ORIGINAL RELEASE NO.:
MODELED TCJW
DATE 10-12/2017
R-1071S089
PART NO.: 90-106177-04
REV: 02
WIRING INFORMATION
LINE VOLTAGE
-FACTORY STANDARD
-FACTORY OPTION
-FIELD INSTALLED
LOW VOLTAGE
-FACTORY STANDARD
-FACTORY OPTION
-FIELD INSTALLED
REPLACEMENT WIRE
-MUST BE THE SAME SIZE AND TYPE OF INSULATION AS ORIGINAL(105°C MIN.)
WARNING
-CABINET MUST BE PERMANENTLY GROUNDED AND CONNECTED TO EARTH GROUND IN ACCORDANCE WITH N.E.C. AND LOCAL 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 (CC1).
4. REMOVE JI AT (CC1) TO INSTALL LOW AMBIENT ACCESSORY.
5. IF REQUIRED, ATTACH CRANKCASE HEATER ACCESSORY TO CC1 (L1) AND CC1 (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.
UNIT VOLTAGES-HZ TRANSFORMER TERM.
200/220~50 HZ 220
208~60 HZ 208
220~60 HZ 220
380~60 HZ 380
380-414~50 HZ 400
460~60 HZ 460
575~60 HZ 230
8. LOW VOLTAGE CIRCUIT IS N.E.C. CLASS 2 WITH A CLASS 2 TRANSFORMER, 24VAC 50/60 HZ SUPPLIED.
9. MOTOR FACTORY WIRED FOR CORRECT VOLTAGE.
10. REMOVE PL23 JUMPER FOR OPTIONAL FIT LOCATED IN BLOWER COMPARTMENT.
11. REMOVE PL36 FOR ECONOMIZER OR SMOKE DETECTOR ACCESSORY. PL34 AND PL36 LOCATED IN RETURN AIR SECTION.
12. MAS ACCESSORY PROVIDED WITH ECONOMIZER. PL35 LOCATED IN BLOWER COMPARTMENT.
COMPONENT CODES
BC BLOWER CONTACTOR
CA COMFORT ALERT MODULE
CC COMPRESSOR CONTACTOR
CCH CRANKCASE HEATER
CDS CLOGGED DRAIN SENSOR
CFS CLOGGED FILTER SWITCH
COMP COMPRESSOR
CT CONTROL TRANSFORMER
DAT DISCHARGE AIR SENSOR
DISC DISCONNECT SWITCH
FLMS FLAME SENSOR
FP FAN PROVING SWITCH
FS FREEZE SENSOR
FT FREEZE STAT
GFCI GROUND FAULT CONVENIENCE OUTLET
GL GROUND LUG
GND GROUND
GV GAS VALVE
HPC HIGH PRESSURE CONTROL
IBM BD INDOOR BLOWER MOTOR BELT DRIVE
IDM INDUCED DRAFT MOTOR
IFC INTEGRATED FURNACE CONTROL
J JACK
LAC LOW AMBIENT CONTROL
LPC LOW PRESSURE CONTROL
MAS MIXED AIR SENSOR
MLH MAIN LIMIT CONTROL
MLC MANUAL RESET LIMIT CONTROL
MPC MEDIUM PRESSURE SWITCH
NPC NEGATIVE PRESSURE SWITCH
OAT OUTDOOR AIR SENSOR
OFM OUTDOOR FAN MOTOR
PL PLUG
PT POWER TRANSFORMER
RAT RETURN AIR SENSOR
RC RUN CAPACITOR
RVC-U-C REVERSING VALVE CONTROL
SE SPARK ELECTRODE
## WIRE TIES




## 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 | CONTINOUS 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 | 2nd 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 | 1st Stage COMBUSTION PRESS SWITCH CLOSED | 2 |
| 46 | 1st Stage COMBUSTION PRESS SWITCH OPEN | 2 |
| 49 | FREEZE SWITCH OPEN – CIRCUIT 1 | 2 |
| 50 | FREEZE SWITCH OPEN -CIRCUIT2 | 2 |
| 55 | 2nd Stage COMBUSTION PRESS SWITCH CLOSED | 2 |
| 57 | 2nd 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

## WIRING INFORMATION

LINE VOLTAGE
- FACTORY STANDARD
- FACTORY OPTION
- FIELD INSTALLED

LOW VOLTAGE
- FACTORY STANDARD
- FACTORY OPTION
- FIELD INSTALLED

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

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

## 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 (CC1).
4. REMOVE J3 AT (CC1) TO INSTALL LOW AMBIENT ACCESSORY.
5. IF REQUIRED, ATTACH CRANKCASE HEATER ACCESSORY TO CC1 (L1) AND CC1 (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 CONNECTIONS FOR ALTERNATE VOLTAGES, IF REQUIRED.

| UNIT VOLTAGES - HZ | TRANSFORMER TERM. |
|---|---|
| 200-220 - 50HZ | 200 |
| 208 - 60HZ | 230 |
| 220 - 50HZ | 230 |
| 380 - 60HZ | 400 |
| 380-415 - 50HZ | 400 |
| 460 - 60HZ | 460 |
| 575 - 60HZ | 230 |

8. LOW VOLTAGE CIRCUIT IS N.E.C. CLASS 2 WITH A CLASS 2 TRANSFORMER, 24VAC 50/60 HZ SUPPLIED.
9. MOTOR FACTORY WIRED FOR CORRECT VOLTAGE.
10. REMOVE PL36 FOR ECOMOMIZER ACCESSORY. PL34 AND PL36 LOCATED IN RETURN AIR SECTION.
11. CONNECT TO ECONOMIZER LOGIC MODULE.

## COMPONENT CODES

| | |
|---|---|
| BC | BLOWER CONTACTOR |
| CA | COMFORT ALERT MODULE |
| CC | COMPRESSOR CONTACTOR |
| CCH | CRANKCASE HEATER |
| CDS | CLOG DRAIN SENSOR |
| CFS | CLOGGED FILTER SWITCH |
| COMP | COMPRESSOR |
| CT | CONTROL TRANSFORMER |
| DAT | DISCHARGE AIR SSENSOR |
| DSC | DISCONNECT SWITCH |
| ELM | ECONOMIZER LOGIC MODULE |
| FLMS | FLAME SENSOR |
| FP | FAN PROVING |
| FS | FREEZE SENSOR |
| FT | FREEZE STAT |
| GFCO | GROUND FAULT CONVENIENCE OUTLET |
| GL | GROUND LUG |
| GND | GROUND |
| HPC | HIGH PRESSURE CONTROL |
| IBM | INDOOR BLOWER MOTOR |
| IDM | INDUCED DRAFT MOTOR |
| IFC | INTEGRATED FURNACE CONTROL |
| LAC | LOW AMBIENT CONTROL |
| LPC | LOW PRESSURE CONTROL |
| MRLC | MANUAL RESET LIMIT CONTROL |
| NPC | NEGATIVE PRESSURE SWITCH |
| OAT | OUTSIDE AIR SENSOR |
| OFM | OUTDOOR FAN MOTOR |
| PL | PLUG |
| PT | POWER TRANSFORMER |
| RAT | RETURN AIR SENSOR |
| RC | RUN CAPACITOR |
| RTU-C | ROOFTOP UNIT CONTROL |
| SE | SPARK ELECTRODE |
| TB | TERMINAL BLOCK |

## 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 NON DDC 1-STG 090/102/120
575V 3PH 60Hz

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

**FIGURE 29**

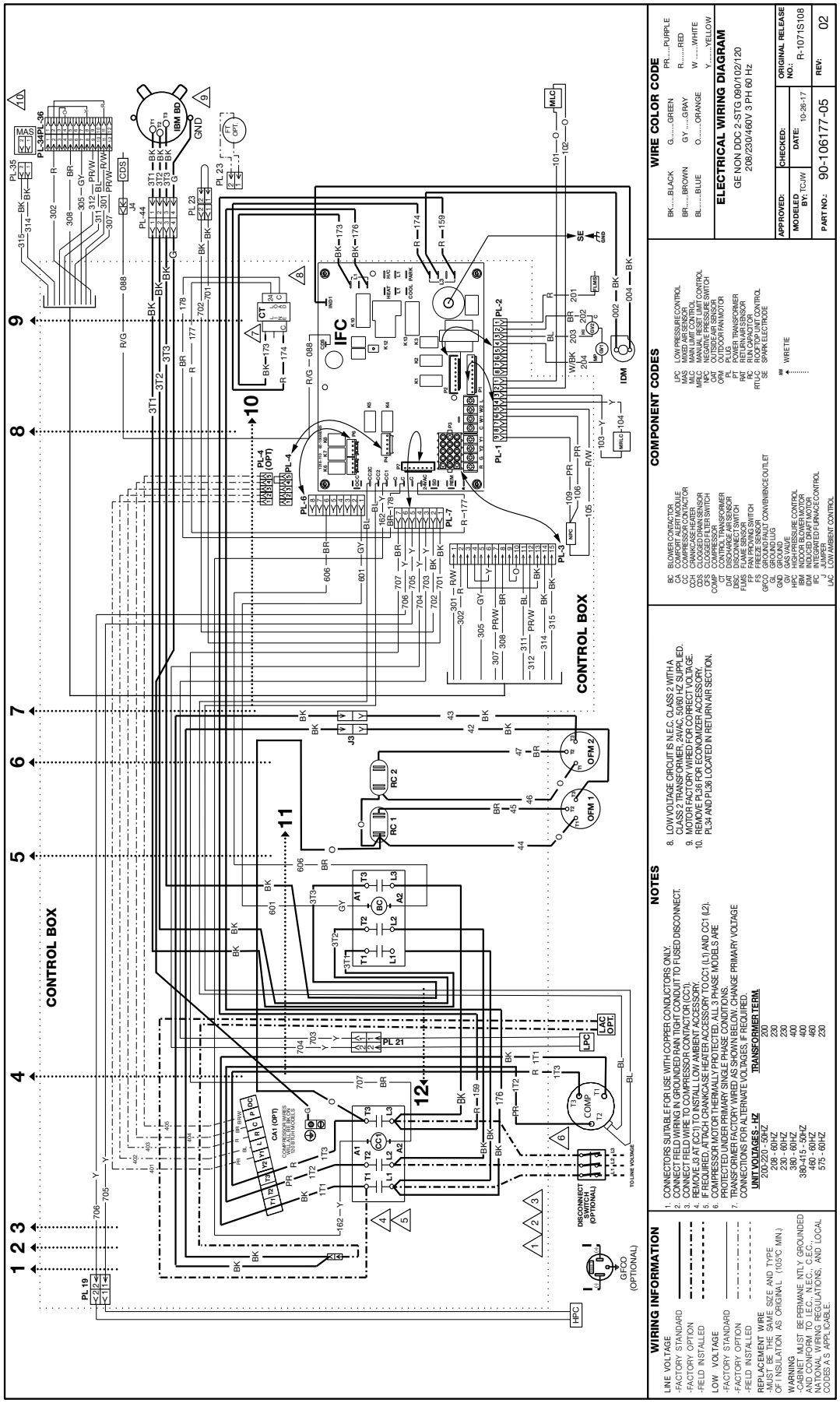
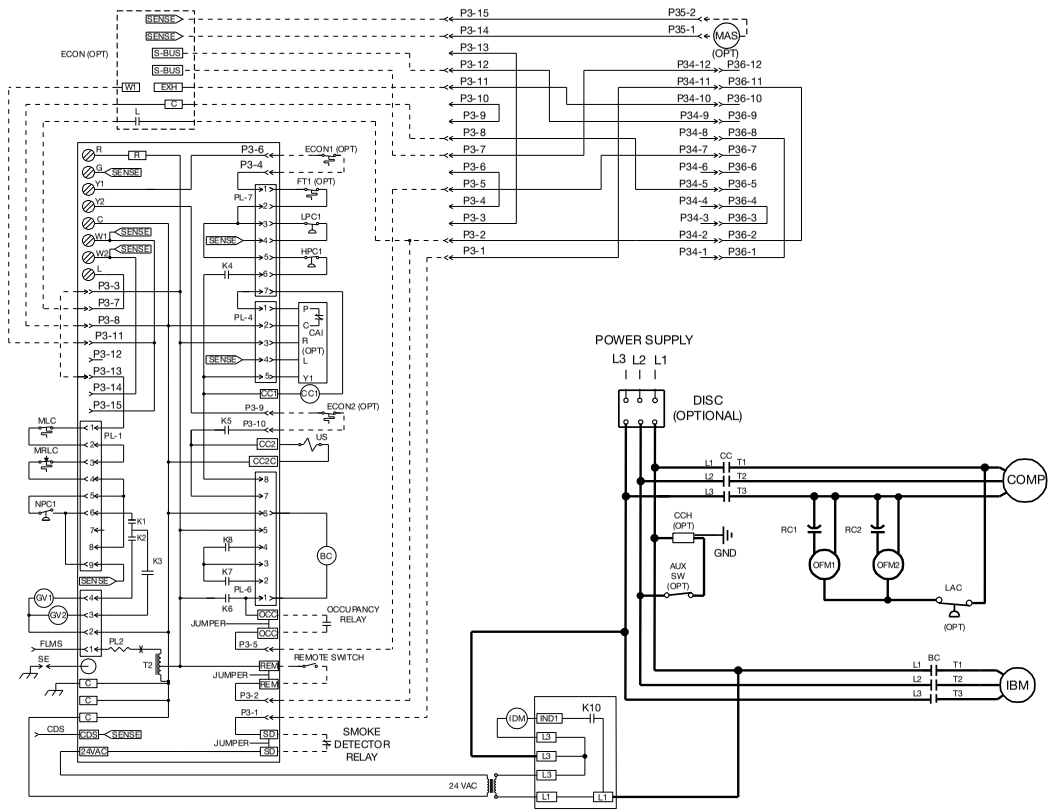

CONTROL BOX
IFC
IDM
IBM BD
PL-1
PL-2
PL-3
PL-4
PL-6
PL-7
PL 19
PL 21
PL 23
PL-35
PL-44
PL-24PL-06
RC 1
RC 2
OFM 1
OFM 2
BC
CC1
CT
LPC
LAC OPT
HPC
COMP
GFCO
DISCONNECT SWITCH (OPTIONAL)
TO LINE VOLTAGE
CA1 (OPT)
COMPRESSOR WIRES 460/575 MODELS 208/230 MODELS
J3
J4
CDS
MA
MLC
MLV
SE
GND
WIRING INFORMATION
LINE VOLTAGE
-FACTORY STANDARD
-FACTORY OPTION
-FIELD INSTALLED
LOW VOLTAGE
-FACTORY STANDARD
-FACTORY OPTION
-FIELD INSTALLED
REPLACEMENT WIRE MUST BE SAME SIZE AND TYPE OF INSULATION AS ORIGINAL (105°C MIN.)
WARNING
-CABINET MUST BE PERMANE NTLY GROUNDED AND CONFORM TO LE.C., N.E.C., C.E.C., NATIONAL WIRING REGULATIONS, AND LOCAL CODES A S 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 (CC1).
4. REMOVE J8 AT (CC1) TO INSTALL LOW AMBIENT ACCESSORY.
5. IF REQUIRED, ATTACH CRANKCASE HEATER ACCESSORY TO CC1 (L1) AND CC1 (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 CONNECTIONS FOR ALTERNATE VOLTAGES, IF REQUIRED.
UNIT VOLTAGES - HZ / TRANSFORMER TERM.
200-220 - 50HZ 200
208 - 60HZ 230
230 - 60HZ 230
380 - 60HZ 400
380/415 - 50HZ 400
460 - 60HZ 460
575 - 60HZ 230
8. LOW VOLTAGE CIRCUIT IS N.E.C. CLASS 2 WITH A CLASS 2 TRANSFORMER, 24VAC, 50/60 HZ SUPPLIED.
9. MOTOR FACTORY WIRED FOR CORRECT VOLTAGE.
10. REMOVE PL36 FOR ECONOMIZER ACCESSORY. PL34 AND PL36 LOCATED IN RETURN AIR SECTION.
COMPONENT CODES
BC BLOWER CONTACTOR
CA COMFORT ALERT MODULE
CC COMPRESSOR CONTACTOR
CCH CRANKCASE HEATER
CDS CLOGGED DRAIN SENSOR
CFS CLOGGED FILTER SWITCH
COMP COMPRESSOR
CT CONTROL TRANSFORMER
DAT DISCHARGE AIR SENSOR
DSC DISCHARGE SWITCH
FLMS FLAME SENSOR
FP FAN PROVING SWITCH
GND GROUND
GFCO GROUND FAULT CONVENIENCE OUTLET
GL GROUND LUG
GRD GROUND
GV GAS VALVE
HPC HIGH PRESSURE CONTROL
IBM INTEGRATED BOARD MOTOR
IDM INDUCED DRAFT MOTOR
IFC INTEGRATED FURNACE CONTROL
LAC LOW AMBIENT CONTROL
LPC LOW PRESSURE CONTROL
MAS MIXED AIR SENSOR
MLC MAIN LIMIT CONTROL
MRLC MANUAL RESET LIMIT CONTROL
NPC NEGATIVE PRESSURE SWITCH
OAS OUTDOOR AIR SENSOR
ODM OUTDOOR FAN MOTOR
PL PLUG
PWR POWER TRANSFORMER
RAT RETURN AIR SENSOR
RC RUN CAPACITOR
RTC ROOFTOP CONTROL
SE SPARK ELECTRODE
WIRE TIE
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 NON DDC 2-STG 090/102/120
208/230/460V 3 PH 60 Hz
APPROVED:
CHECKED:
ORIGINAL RELEASE NO.:
MODELED BY: TCJW
DATE: 10-26-17
R-1071S108
PART NO.: 90-106177-05
REV: 02

FIGURE 30




## 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 | CONTINOUS 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 | 2nd 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 –CIRCUIT1 | 2 |
| 30 | REFRIGERANT HIGH PRESSURE SWITCH OPEN –CIRCUIT2 | 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 | 1st Stage COMBUSTION PRESS SWITCH CLOSED | 2 |
| 46 | 1st Stage COMBUSTION PRESS SWITCH OPEN | 2 |
| 49 | FREEZE SWITCH OPEN – CIRCUIT 1 | 2 |
| 50 | FREEZE SWITCH OPEN -CIRCUIT2 | 2 |
| 55 | 2nd Stage COMBUSTION PRESS SWITCH CLOSED | 2 |
| 57 | 2nd 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

### 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 (105ºC MIN.)

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

### 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 (CC1).
4. REMOVE J3 AT (CC1) TO INSTALL LOW AMBIENT ACCESSORY.
5. IF REQUIRED, ATTACH CRANKCASE HEATER ACCESSORY TO CC1 (L1) AND CC1 (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 CONNECTIONS FOR ALTERNATE VOLTAGES, IF REQUIRED.

| UNIT VOLTAGES - HZ | TRANSFORMER TERM. |
|---|---|
| 200-220 - 50HZ | 200 |
| 208 - 60HZ | 230 |
| 230 - 60HZ | 230 |
| 380 - 60HZ | 400 |
| 380-415 - 50HZ | 400 |
| 460 - 60HZ | 460 |
| 575 - 60HZ | 230 |

8. LOW VOLTAGE CIRCUIT IS N.E.C. CLASS 2 WITH A CLASS 2 TRANSFORMER, 24VAC, 50/60 HZ SUPPLIED.
9. MOTOR FACTORY WIRED FOR CORRECT VOLTAGE.
10. REMOVE PL36 FOR ECONOMIZER ACCESSORY. PL34 AND PL36 LOCATED IN RETURN AIR SECTION.

### COMPONENT CODES

| | |
|---|---|
| BC | BLOWER CONTACTOR |
| CA | COMFORT ALERT MODULE |
| CC | COMPRESSOR CONTACTOR |
| CCH | CRANKCASE HEATER |
| CDS | CLOGGED DRAIN SENSOR |
| CFS | CLOGGED FILTER SWITCH |
| COMP | COMPRESSOR |
| CT | CONTROL TRANSFORMER |
| DAT | DISCHARGE AIR SENSOR |
| DISC | DISCONNECT SWITCH |
| FLMS | FLAME SENSOR |
| FP | FAN PROVING |
| FS | FREEZE SENSOR |
| GFCO | GROUND FAULT CONVENIENCE OUTLET |
| GL | GROUND LUG |
| GND | GROUND |
| HPC | HIGH PRESSURE CONTROL |
| IBM | INDOOR BLOWER MOTOR |
| IDM | INDUCED DRAFT MOTOR |
| IFC | INTEGRATED FURNACE CONTROL |
| LAC | LOW AMBIENT CONTROL |
| LPC | LOW PRESSURE CONTROL |
| MAS | MIXED AIR SENSOR |
| MLC | MAIN LIMIT CONTROL |
| MRLC | MANUAL RESET LIMIT CONTROL |
| NPC | NEGATIVE PRESSURE SWITCH |
| OAT | OUTSIDE AIR SENSOR |
| OFM | OUTDOOR FAN MOTOR |
| PL | PLUG |
| PT | POWER TRANSFORMER |
| RAT | RETURN AIR SENSOR |
| RC | RUN CAPACITOR |
| RTU-C | ROOFTOP UNIT CONTROL |
| SE | SPARK ELECTRODE |
| US | UNLOADER SOLENOID |

### WIRE COLOR CODE

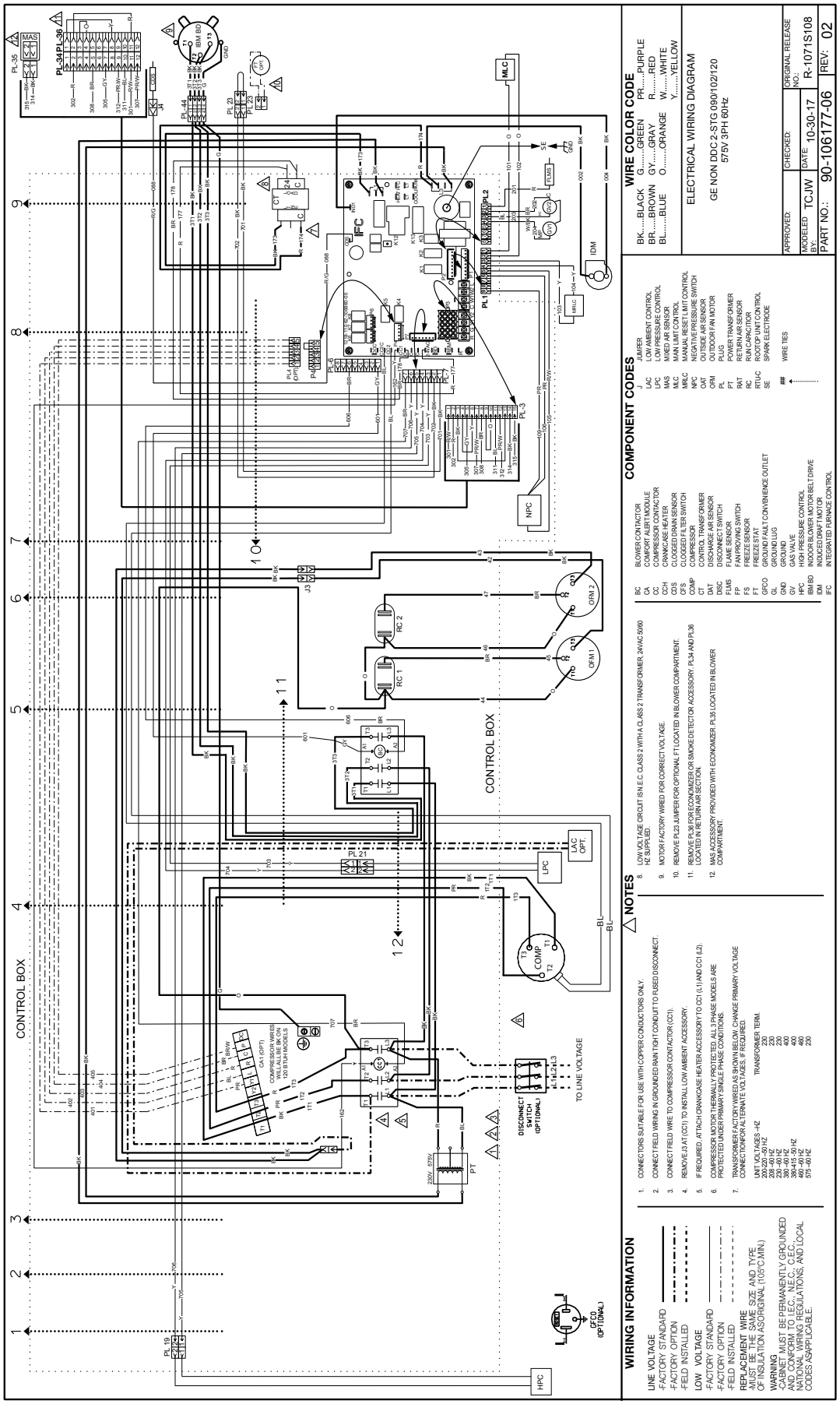
| | | |
|---|---|---|
| BK.....BLACK | G.....GREEN | PR.....PURPLE |
| BR.....BROWN | GY.....GRAY | R.....RED |
| BL.....BLUE | O.....ORANGE | W .....WHITE |
| | | Y .....YELLOW |

### ELECTRICAL WIRING SCHEMATIC

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

| APPROVED: | CHECKED: | ORIGINAL RELEASE NO.: |
|---|---|---|
| MODELED BY: TCJW | DATE: 10-27-17 | R-1071S108 |
| PART NO.: 90-106178-05 | | REV: 02 |

**FIGURE 31**




## 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 ASORIGINAL (105°C MIN.)

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

## 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 (CC1).
4. REMOVE J3 AT (CC1) TO INSTALL LOW AMBIENT ACCESSORY.
5. IF REQUIRED, ATTACH CRANKCASE HEATER ACCESSORY TO CC1 (L1) AND CC1 (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 CONNECTIONFOR ALTERNATE VOLTAGES, IF REQUIRED.

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

8. LOW VOLTAGE CIRCUIT IS N.E.C. CLASS 2 WITH A CLASS 2 TRANSFORMER, 24VAC 50/60 HZ SUPPLIED.
9. MOTOR FACTORY WIRED FOR CORRECT VOLTAGE.
10. REMOVE PL23 JUMPER FOR OPTIONAL FIT LOCATED IN BLOWER COMPARTMENT.
11. REMOVE PL36 FOR ECONOMIZER OR SMOKE DETECTOR ACCESSORY. PL34 AND PL36 LOCATED IN RETURN AIR SECTION.
12. MAS ACCESSORY PROVIDED WITH ECONOMIZER. PL36 LOCATED IN BLOWER COMPARTMENT.

## COMPONENT CODES

| | |
|---|---|
| BC | BLOWER CONTACTOR |
| CA | COMFORT ALERT MODULE |
| CC | COMPRESSOR CONTACTOR |
| CCH | CRANKCASE HEATER |
| CDS | CLOGGED DRAIN SENSOR |
| CFS | CLOGGED FILTER SWITCH |
| COMP | COMPRESSOR |
| CT | CONTROL TRANSFORMER |
| DAT | DISCHARGE AIR SENSOR |
| DISC | DISCONNECT SWITCH |
| FLMS | FLAME SENSOR |
| FP | FAN PROVING SWITCH |
| FS | FREEZE SENSOR |
| FT | FREEZE STAT |
| GFCO | GROUND FAULT CONVENIENCE OUTLET |
| GL | GROUND LUG |
| GND | GROUND |
| GV | GAS VALVE |
| HPC | HIGH PRESSURE CONTROL |
| IBM BD | INDOOR BLOWER MOTOR BELT DRIVE |
| IDM | INDUCED DRAFT MOTOR |
| IFC | INTEGRATED FURNACE CONTROL |
| JA | JUMPER |
| LAC | LOW AMBIENT CONTROL |
| LPC | LOW PRESSURE CONTROL |
| MAS | MIXED AIR SENSOR |
| MLC | MAIN LIMIT CONTROL |
| MRLC | MANUAL RESET LIMIT CONTROL |
| NPC | NEGATIVE POSITIVE CUTOUT SWITCH |
| OAT | OUTSIDE AIR SENSOR |
| OFM | OUTDOOR FAN MOTOR |
| PL | PLUG |
| PT | POWER TRANSFORMER |
| RAT | RETURN AIR SENSOR |
| RC | RUN CONTACTOR |
| RTUC | ROOFTOP UNIT CONTROL |
| SE | SPARK ELECTRODE |
| ## | WIRE TIES |

**WIRE COLOR CODE**

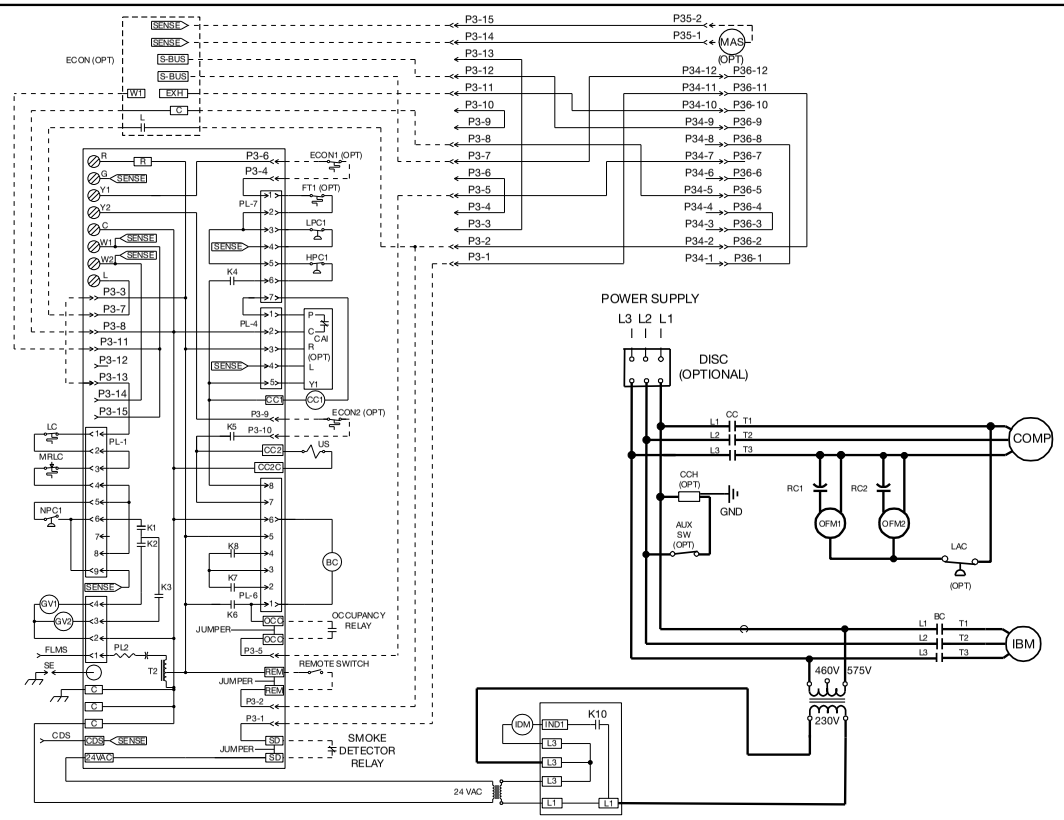
| | | | |
|---|---|---|---|
| BK.....BLACK | G.....GREEN | PR.....PURPLE |
| BR.....BROWN | GY.....GRAY | R.....RED |
| BL.....BLUE | O.....ORANGE | W.....WHITE |
| | | Y.....YELLOW |

ELECTRICAL WIRING DIAGRAM

GE NON DDC 2-STG 090/102/120
575V 3PH 60Hz

| | | | |
|---|---|---|---|
| APPROVED: | CHECKED: | | ORIGINAL RELEASE NO.: |
| MODELED: TC.JW | DATE: 10-30-17 | | R-1071S108 |
| PART NO.: 90-106177-06 | | REV: 02 | |

FIGURE 32




## 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 | CONTINOUS 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 | 2ND 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 | 1ST Stage COMBUSTION PRESS SWITCH CLOSED | 2 |
| 46 | 1ST Stage COMBUSTION PRESS SWITCH OPEN | 2 |
| 49 | FREEZE SWITCH OPEN – CIRCUIT 1 | 2 |
| 50 | FREEZE SWITCH OPEN -CIRCUIT 2 | 2 |
| 55 | 2ND Stage COMBUSTION PRESS SWITCH CLOSED | 2 |
| 57 | 2ND 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

### WIRING INFORMATION

LINE VOLTAGE
- FACTORY STANDARD
- FACTORY OPTION
- FIELD INSTALLED

LOW VOLTAGE
- FACTORY STANDARD
- FACTORY OPTION
- FIELD INSTALLED

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

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

### 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 (CC1).
4. REMOVE J3 AT (CC1) TO INSTALL LOW AMBIENT ACCESSORY.
5. IF REQUIRED, ATTACH CRANKCASE HEATER ACCESSORY TO CC1 (L1) AND CC1 (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 CONNECTIONS FOR ALTERNATE VOLTAGES, IF REQUIRED.

| UNIT VOLTAGES - HZ | TRANSFORMER TERM. |
|---|---|
| 200-220 - 50HZ | 200 |
| 208 - 60HZ | 230 |
| 230 - 60HZ | 230 |
| 380 - 60HZ | 400 |
| 380-415 - 50HZ | 400 |
| 460 - 60HZ | 460 |
| 575 - 60HZ | 230 |

8. LOW VOLTAGE CIRCUIT IS N.E.C. CLASS 2 WITH A CLASS 2 TRANSFORMER, 24VAC 50/60 HZ SUPPLIED.
9. MOTOR FACTORY WIRED FOR CORRECT VOLTAGE.
10. REMOVE PL36 FOR ECOMOMIZER ACCESSORY. PL34 AND PL36 LOCATED IN RETURN AIR SECTION.
11. CONNECT TO ECONOMIZER LOGIC MODULE.

### COMPONENT CODES

| | |
|---|---|
| BC | BLOWER CONTACTOR |
| CA | COMFORT ALERT MODULE |
| CC | COMPRESSOR CONTACTOR |
| CCH | CRANKCASE HEATER |
| CDS | CLOG DRAIN SENSOR |
| CFS | CLOGGED FILTER SWITCH |
| COMP | COMPRESSOR |
| CT | CONTROL TRANSFORMER |
| DAT | DISCHARGE AIR SENSOR |
| DISC | DISCONNECT SWITCH |
| ELM | ECONOMIZER LOGIC MODULE |
| FLMS | FLAME SENSOR |
| FP | FAN PROVING |
| FS | FREEZE SENSOR |
| FT | FREEZE STAT |
| GFCO | GROUND FAULT CONVENIENCE OUTLET |
| GL | GROUND LUG |
| GND | GROUND |
| HPC | HIGH PRESSURE CONTROL |
| IBM | INDOOR BLOWER MOTOR |
| IDM | INDUCED DRAFT MOTOR |
| IFC | INTEGRATED FURNACE CONTROL |
| LAC | LOW AMBIENT CONTROL |
| LPC | LOW PRESSURE CONTROL |
| MRLC | MANUAL RESET LIMIT CONTROL |
| NPC | NEGATIVE PRESSURE SWITCH |
| OAT | OUTSIDE AIR SENSOR |
| OFM | OUTDOOR FAN MOTOR |
| PL | PLUG |
| PT | POWER TRANSFORMER |
| RAT | RETURN AIR SENSOR |
| RC | RUN CAPACITOR |
| RTU-C | ROOFTOP UNIT CONTROL |
| SE | SPARK ELECTRODE |
| TB | TERMINAL BLOCK |
| US | UNLOADER SOLENOID |

### WIRE COLOR CODE

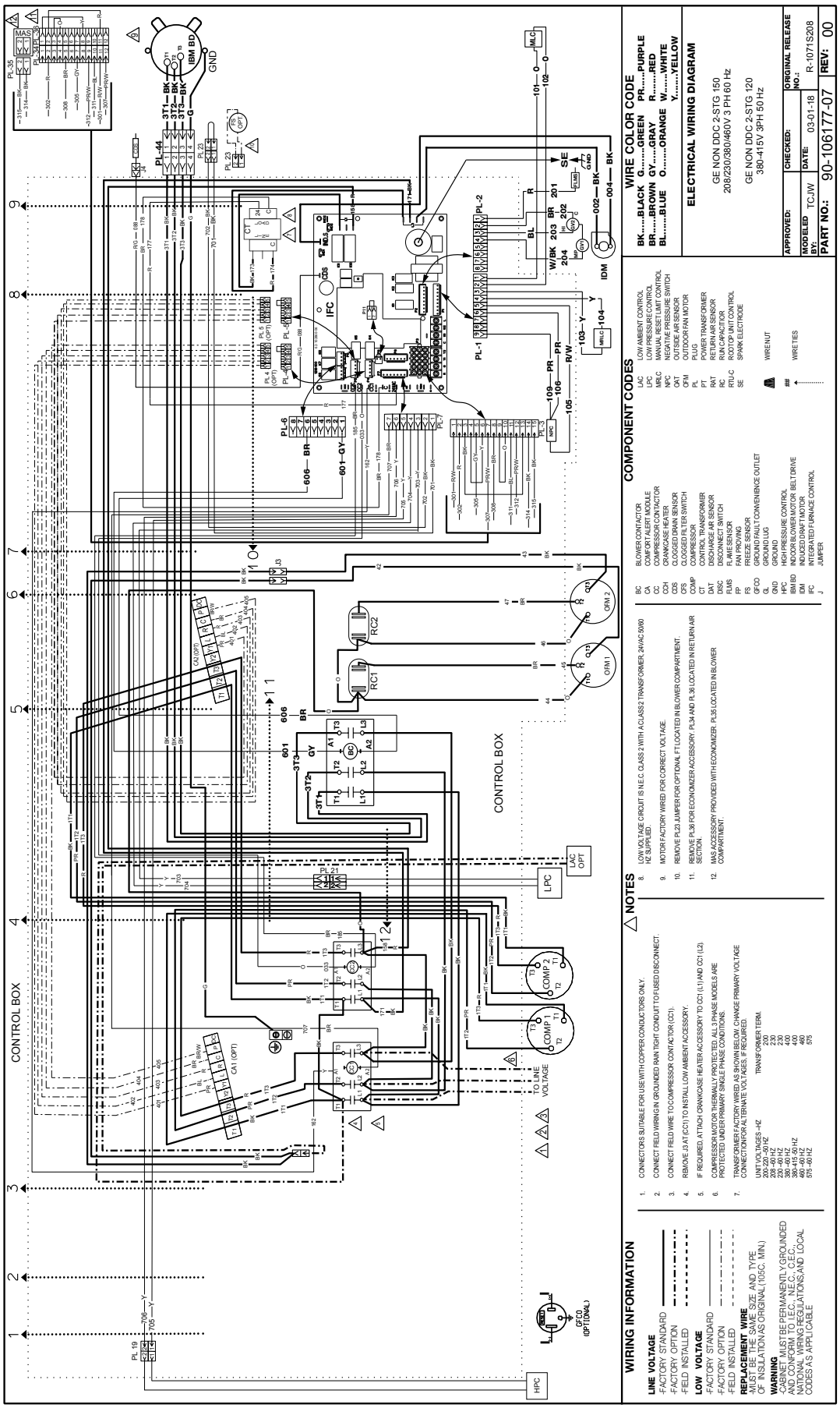
| | | |
|---|---|---|
| BK.....BLACK | G.....GREEN | PR.....PURPLE |
| BR.....BROWN | GY.....GRAY | R.....RED |
| BL.....BLUE | O.....ORANGE | W .....WHITE |
| | | Y.....YELLOW |

### ELECTRICAL WIRING SCHEMATIC

GE NON DDC 2-STG 090/102/120
575V 3PH 60Hz

| | | |
|---|---|---|
| APPROVED: | CHECKED: | ORIGINAL RELEASE NO.: |
| MODELED BY: TCJW | DATE: 10-30-17 | R-1071S108 |
| PART NO.: 90-106178-06 | | REV: 02 |

**FIGURE 33**




## 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**
-CABINET MUST BE PERMANENTLY GROUNDED AND CONFORM TO N.E.C. AND LOCAL NATIONAL WIRING REGULATIONS,AND LOCAL CODES A.S 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 (CC1).
4. REMOVE J3 AT (CC1) TO INSTALL LOW AMBIENT ACCESSORY.
5. IF REQUIRED, ATTACH CRANKCASE HEATER ACCESSORY TO CC1 (L11 AND CC1 (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 CONNECTIONFOR ALTERNATE VOLTAGES. IF REQUIRED.

| UNIT VOLTAGES--HZ | TRANSFORMER TERM. |
|---|---|
| 200-220--50 HZ | 200 |
| 208-60 HZ | 230 |
| 220-240--50 HZ | 230 |
| 380-60 HZ | 400 |
| 380-415-50 HZ | 400 |
| 460-60 HZ | 460 |
| 575 -60 HZ | 575 |

8. LOW VOLTAGE CIRCUIT IS N.E.C. CLASS 2 WITH A CLASS 2 TRANSFORMER, 24VAC 50/60 HZ (UNPOWER).
9. MOTOR FACTORY WIRED FOR CORRECT VOLTAGE.
10. REMOVE PL23 JUMPER FOR OPTIONAL FT LOCATED IN BLOWER COMPARTMENT.
11. REMOVE PL36 FOR ECONOMIZER ACCESSORY. PL34 AND PL35 LOCATED IN RETURN AIR SECTION.
12. MAS ACCESSORY PROVIDED WITH ECONOMIZER. PL35 LOCATED IN BLOWER COMPARTMENT.

## COMPONENT CODES

| | |
|---|---|
| BC | BLOWER CONTACTOR |
| CA | COMFORT ALERT MODULE |
| CC | COMPRESSOR CONTACTOR |
| CCH | CRANKCASE HEATER |
| CDS | CLOGGED DRAIN SENSOR |
| CFS | CLOGGED FILTER SWITCH |
| COMP | COMPRESSOR |
| CT | CONTROL TRANSFORMER |
| DAT | DISCHARGE AIR SENSOR |
| DISC | DISCONNECT SWITCH |
| FLMS | FLAME SENSOR |
| FP | FAN PROVING |
| FS | FREEZE SENSOR |
| GFCO | GROUND FAULT CONVENIENCE OUTLET |
| GL | GROUND LUG |
| GND | GROUND |
| HPC | HIGH PRESSURE CONTROL |
| IBM BD | INDOOR BLOWER MOTOR BELT DRIVE |
| IDM | INDOOR DRIVE MOTOR |
| IFC | INTEGRATED FURNACE CONTROL |
| J | JUMPER |
| LAC | LOW AMBIENT CONTROL |
| LPC | LOW PRESSURE CONTROL |
| MRLC | MANUAL RESET LIMIT CONTROL |
| NPC | NEGATIVE PRESSURE SWITCH |
| OAT | OUTSIDE AIR SENSOR |
| OFM | OUTDOOR FAN MOTOR |
| P | PLUG |
| PL | POWER TRANSFORMER |
| RAT | RETURN AIR SENSOR |
| RC | RUN CAPACITOR |
| RTU-C | ROOFTOP UNIT CONTROL |
| SE | SPARK ELECTRODE |
| | WIRE NUT |
| ## | WIRE TIES |

**FIGURE 34**

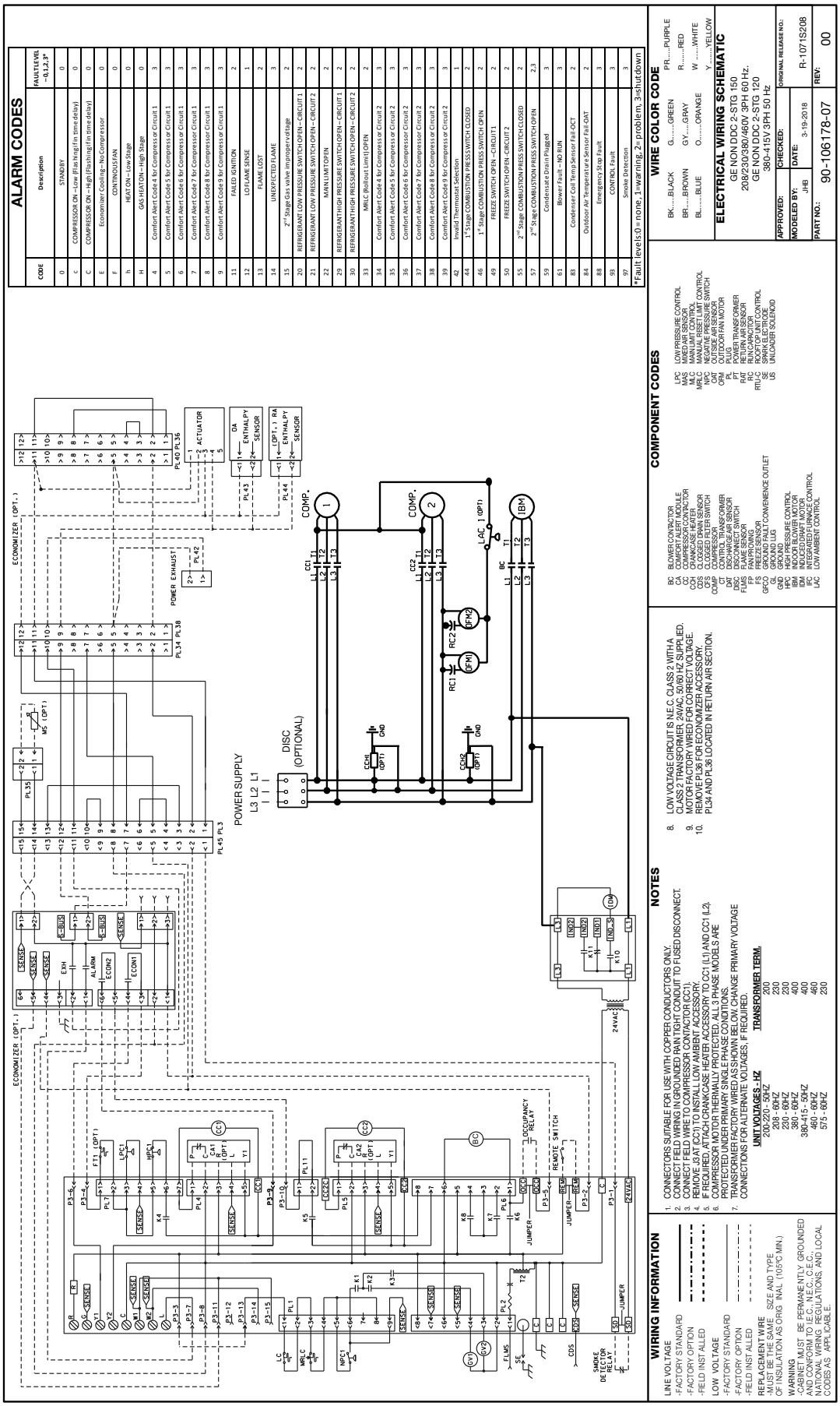

ALARM CODES
CODE | Description | FAULT LEVEL –0,1,2,3*
0 | STANDBY | 0
C | COMPRESSOR ON – Low (Flashing1in time delay) | 0
C | COMPRESSOR ON – High (Flashing1in time delay) | 0
E | Economizer Cooling– No Compressor | 0
F | CONTINOUS FAN | 0
h | HEAT ON – Low Stage | 0
H | GAS HEATON – High Stage | 0
4 | Comfort Alert Code 4 for Compress or Circuit 1 | 3
5 | Comfort Alert Code 5 for Compress or Circuit 1 | 3
6 | Comfort Alert Code 6 for Compress or Circuit 1 | 3
7 | Comfort Alert Code 7 for Compressor Circuit 1 | 3
8 | Comfort Alert Code 8 for Compress or Circuit 1 | 3
9 | Comfort Alert Code 9 for Compress or Circuit 1 | 3
11 | FAILED IGNITION | 2
12 | LO FLAME SENSE | 1
13 | FLAME LOST | 2
14 | UNEXPECTED FLAME | 3
15 | 2nd 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 Compress or Circuit 2 | 3
35 | Comfort Alert Code 5 for Compress or Circuit 2 | 3
36 | Comfort Alert Code 6 for Compress or Circuit 2 | 3
37 | Comfort Alert Code 7 for Compress or Circuit 2 | 3
38 | Comfort Alert Code 8 for Compress or Circuit 2 | 3
39 | Comfort Alert Code 9 for Compress or Circuit 2 | 3
42 | Invalid Thermostat Selection | 1
44 | 1st Stage COMBUSTION PRESS SWITCH CLOSED | 2
46 | 1st Stage COMBUSTION PRESS SWITCH OPEN | 2
49 | FREEZE SWITCH OPEN – CIRCUIT 1 | 2
50 | FREEZE SWITCH OPEN – CIRCUIT 2 | 2
55 | 2nd Stage COMBUSTION PRESS SWITCH CLOSED | 2
57 | 2nd 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
WIRE COLOR CODE
BK.....BLACK G.....GREEN PR.....PURPLE
BR.....BROWN GY.....GRAY R.....RED
BL.....BLUE O.....ORANGE W.....WHITE
Y.....YELLOW
COMPONENT CODES
BC BLOWER CONTACTOR
CA COMFORT ALERT MODULE
CC COMPRESSOR CONTACTOR
CCH CRANKCASE HEATER
CDS CLOGGED DRAIN SENSOR
CFS CLOGGED FILTER SWITCH
COMP COMPRESSOR
CT CONTROL TRANSFORMER
DAT DISCHARGE AIR SENSOR
DISC DISCONNECT SWITCH
FLMS FLAME SENSOR
FM FAN MOTOR
FS FREEZE SENSOR
GFCO GROUND FAULT CONVENIENCE OUTLET
GND GROUND LUG
GND GROUND
HPC HIGH PRESSURE CONTROL
IFM INDOOR FAN MOTOR
IDM INDUCED DRAFT MOTOR
IFC INTEGRATED FURNACE CONTROL
LAC LOW AMBIENT CONTROL
LPC LOW PRESSURE CONTROL
MAT MIXED AIR SENSOR
M.C MAIN LIMIT CONTROL
MRLC MANUAL RESET LIMIT CONTROL
NPC NEGATIVE PRESSURE SWITCH
OAT OUTSIDE AIR SENSOR
ODM OUTDOOR FAN MOTOR
PL PLUG
PT POWER TRANSFORMER
RAT RETURN AIR SENSOR
RC REVERSING COIL
RTU-C ROOFTOP UNIT CONTROL
SE SPARK ELECTRODE
UB UNLOADER SOLENOID
ELECTRICAL WIRING SCHEMATIC
GE NON DDC 2-STG 150
208/230/380/460V 3PH 60 Hz.
GE NON DDC 2-STG 120
380-415V 3PH 50 Hz
APPROVED:
CHECKED:
ORIGINAL RELEASE NO.
MODELED BY: JHB
DATE: 3-19-2018
R-1071S208
PART NO.: 90-106178-07
REV: 00
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 (CC1).
4. REMOVE JUMPER TO CONNECT LOW AMBIENT ACCESSORY.
5. IF REQUIRED, ATTACH CRANKCASE HEATER ACCESSORY TO CC1 (L1) AND CC1 (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 CONNECTIONS FOR ALTERNATE VOLTAGES, IF REQUIRED.
UNIT VOLTAGES - HZ / TRANSFORMER TERM.
200-220 - 50HZ 200
208 - 60HZ 230
230 - 60HZ 230
380 - 60HZ 400
380-415 - 50HZ 400
460 - 60HZ 460
575 - 60HZ 230
8. LOW VOLTAGE CIRCUIT IS N.E.C. CLASS 2 WITH A CLASS 2 TRANSFORMER, 24VAC, 50/60 HZ SUPPLIED.
9. MOTOR FACTORY WIRED FOR CORRECT VOLTAGE.
10. REMOVE PL36 FOR ECONOMIZER ACCESSORY. PL34 AND PL36 LOCATED IN RETURN AIR SECTION.
WIRING INFORMATION
LINE VOLTAGE
-FACTORY STANDARD
-FACTORY OPTION
-FIELD INST ALLED
LOW VOLTAGE
-FACTORY STANDARD
-FACTORY OPTION
-FIELD INST ALLED
REPLACEMENT WIRE
-MUST BE THE SAME SIZE AND TYPE OF INSULATION AS ORIG INAL (105°C MIN.)
WARNING
-CABINET MUST BE PERMANENTLY GROUNDED AND CONFORM TO I.E.C., N.E.C., C.E.C., NATIONAL WIRING REGULATIONS, AND LOCAL CODES AS APPLICABLE.
ECONOMIZER (OPT.)
POWER SUPPLY
L3 L2 L1
DISC (OPTIONAL)
COMP. 1
COMP. 2
POWER EXHAUST
DA ENTHALPY SENSOR
RA ENTHALPY SENSOR
ACTUATOR
OCCUPANCY RELAY
REMOTE SWITCH
JUMPER
SMOKE DETECTOR RELAY
24VAC

**FIGURE 35**

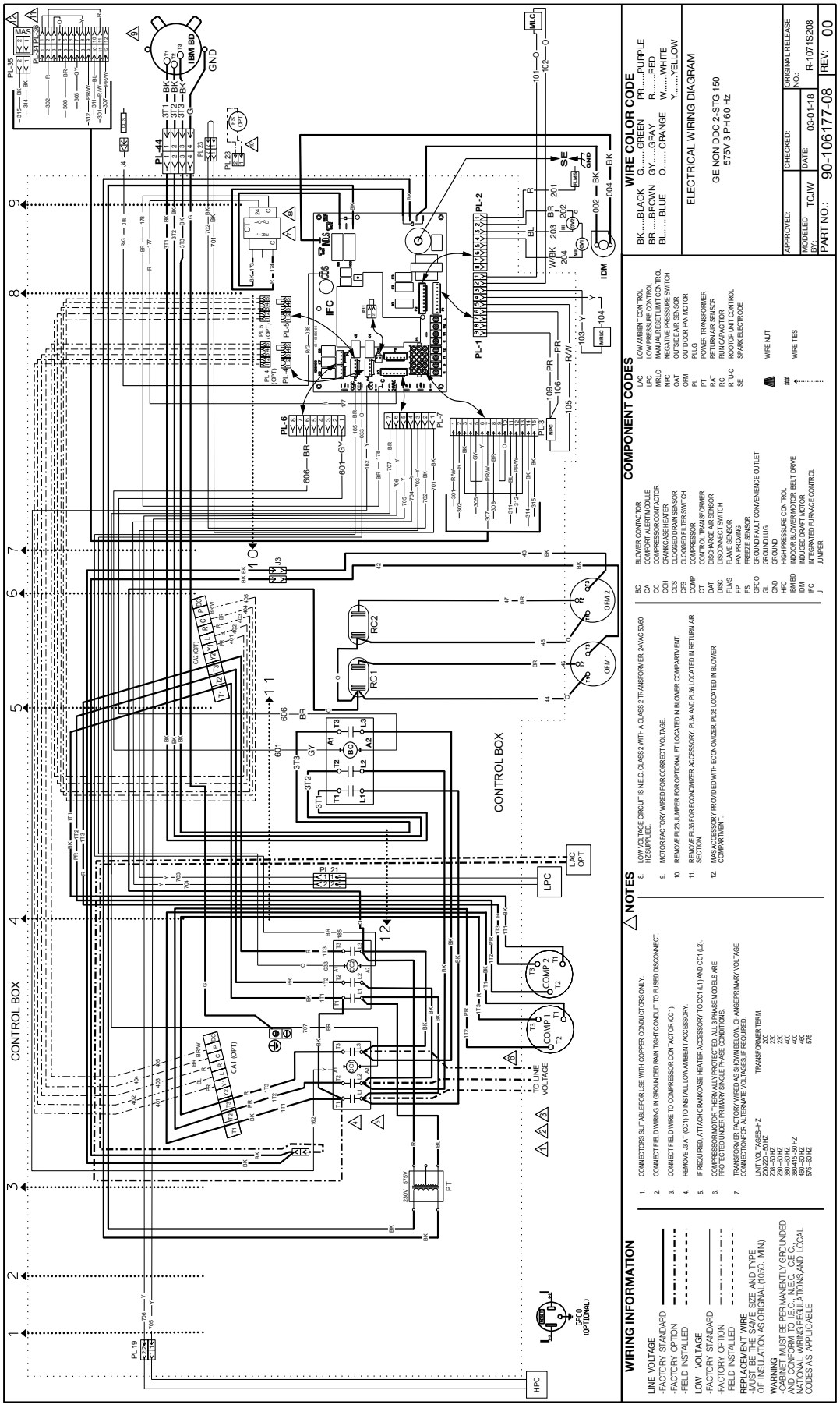

CONTROL BOX
CONTROL BOX
WIRING INFORMATION
LINE VOLTAGE
-FACTORY STANDARD
-FACTORY OPTION
-FIELD INSTALLED
LOW VOLTAGE
-FACTORY STANDARD
-FACTORY OPTION
-FIELD INSTALLED
REPLACEMENT WIRE
-MUST BE THE SAME SIZE AND TYPE
OF INSULATION AS ORIGINAL(105C. MIN)
WARNING
-CABINET MUST BE PERMANENTLY GROUNDED
AND CONFORM TO N.E.C. AND LOCAL
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 (CC1).
4. REMOVE JUMPER FOR OPTIONAL FT LOCATED IN BLOWER COMPARTMENT.
5. REMOVE JUMPER FOR OPTIONAL ACCESSORY. PL34 AND PL35 LOCATED IN RETURN AIR SECTION.
6. IF REQUIRED, ATTACH CRANKCASE HEATER ACCESSORY TO CC1 (L1 AND CC1 (L2).
7. COMPRESSOR MOTOR THERMALLY PROTECTED. ALL 3 PHASE MODELS ARE PROTECTED UNDER PRIMARY SINGLE PHASE CONDITIONS.
8. TRANSFORMER FACTORY WIRED AS SHOWN BELOW. CHANGE PRIMARY VOLTAGE CONNECTION OR ALTERNATE VOLTAGES IF REQUIRED.
UNIT VOLTAGES–HZ TRANSFORMER TERM.
200-220–50 HZ 200
208–60 HZ 208
220-240–50 HZ 220
380-415–50 HZ 400
460–60 HZ 460
575–60 HZ 575
8. LOW VOLTAGE CIRCUIT IS N.E.C. CLASS 2 WITH A CLASS 2 TRANSFORMER, 24VAC 50/60 HZ APPLIED.
9. MOTOR FACTORY WIRED FOR CORRECT VOLTAGE.
10. REMOVE PL23 JUMPER FOR OPTIONAL FT LOCATED IN BLOWER COMPARTMENT.
11. REMOVE PL36 FOR ECONOMIZER ACCESSORY. PL34 AND PL35 LOCATED IN RETURN AIR SECTION.
12. MAS ACCESSORY PROVIDED WITH ECONOMIZER. PL35 LOCATED IN BLOWER COMPARTMENT.
COMPONENT CODES
BC BLOWER CONTACTOR
CA COMFORT ALERT MODULE
CC COMPRESSOR CONTACTOR
CCH CRANKCASE HEATER
CDS CLOGGED DRAIN SENSOR
CFS CLOGGED FILTER SWITCH
COMP COMPRESSOR
CT CONTROL TRANSFORMER
DAT DISCHARGE AIR SENSOR
DISC DISCONNECT SWITCH
FLMS FLAME SENSOR
FP FAN PROVING
FS FREEZE SENSOR
GFCO GROUND FAULT CONVENIENCE OUTLET
GL GROUND LUG
GND GROUND
HPC HIGH PRESSURE CONTROL
IBM BD INDOOR BLOWER MOTOR BELT DRIVE
IDM INDOOR DRIVE MOTOR
IFC INTEGRATED FURNACE CONTROL
J JUMPER
LAC LOW AMBIENT CONTROL
LPC LOW PRESSURE CONTROL
MRLC MANUAL RESET LIMIT CONTROL
NPC NEGATIVE PRESSURE SWITCH
OAT OUTSIDE AIR SENSOR
ODM OUTDOOR FAN MOTOR
PL PLUG
PT POWER TRANSFORMER
RAT RETURN AIR SENSOR
RC RUN CAPACITOR
RTU-C ROOFTOP UNIT CONTROL
SE SPARK ELECTRODE
WIRE NUT
## WIRE TIES
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 NON DDC 2-STG 150
575V 3 PH 60 Hz
APPROVED: CHECKED: ORIGINAL RELEASE NO.:
MODELED TCJW DATE: 03-01-18 R-1071S208
PART NO.: 90-106177-08 REV: 00

**FIGURE 36**

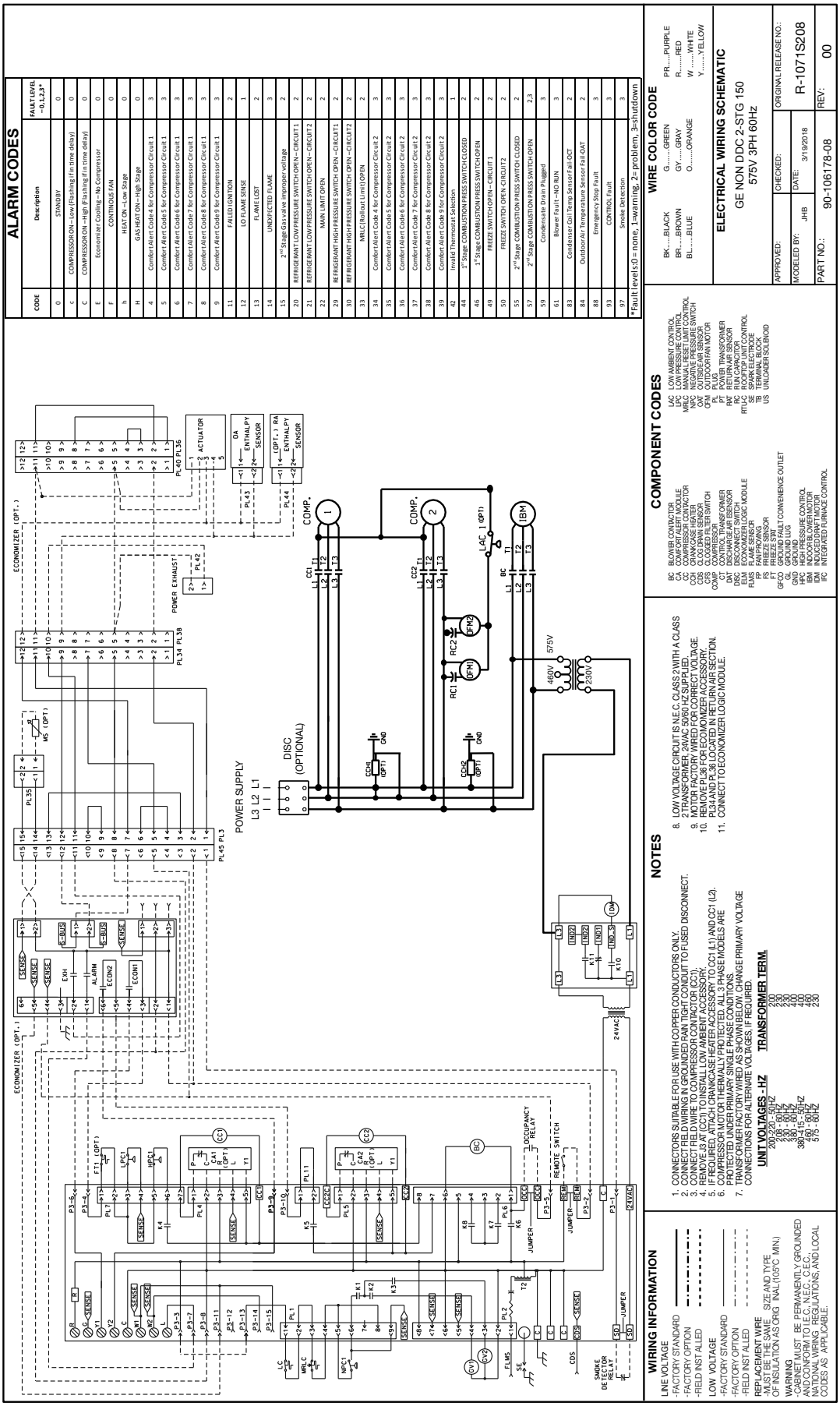

ALARM CODES
CODE | Description | FAULT LEVEL *0,1,2,3*
0 | STANDBY | 0
C | COMPRESSOR ON – Low (Flashing if in time delay) | 0
C | COMPRESSOR ON –High (Flashing if in time delay) | 0
E | Economizer Cooling – No Compressor | 0
F | CONTINOUS FAN | 0
h | HEAT ON – Low Stage | 0
H | GAS HEAT ON – High Stage | 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 | 2nd 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 | 1st Stage COMBUSTION PRESS SWITCH CLOSED | 2
46 | 1st Stage COMBUSTION PRESS SWITCH OPEN | 2
49 | FREEZE SWITCH OPEN – CIRCUIT 1 | 2
50 | FREEZE SWITCH OPEN – CIRCUIT 2 | 2
55 | 2nd Stage COMBUSTION PRESS SWITCH CLOSED | 2
57 | 2nd 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
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 NON DDC 2-STG 150
575V 3PH 60Hz
APPROVED: CHECKED: ORIGINAL RELEASE NO.:
MODELED BY: JHB DATE: 3/19/2018 R-1071S208
PART NO.: 90-106178-08 REV: 00
COMPONENT CODES
BC BLOWER CONTACTOR
CA COMFORT ALERT MODULE
CC COMPRESSOR CONTACTOR
CCH CRANKCASE HEATER
CDS CLOG DRAIN SENSOR
CFS CLOGGED FILTER SWITCH
COMP COMPRESSOR
CT CONTROL TRANSFORMER
DAT DISCHARGE AIR SENSOR
DISC DISCONNECT SWITCH
ELM ECONOMIZER LOGIC MODULE
FLMS FLAME SENSOR
FP FAN PROVING
FS FREEZE SENSOR
FT FREEZE STAT
GFCO GROUND FAULT CONVENIENCE OUTLET
GL GROUND LUG
GND GROUND
HPC HIGH PRESSURE CONTROL
IBM INDOOR BLOWER MOTOR
ICM INTEGRATED CONTROL MODULE
IFC INTEGRATED FURNACE CONTROL
LAC LOW AMBIENT CONTROL
LPC LOW PRESSURE CONTROL
MRLC MANUAL RESET LIMIT CONTROL
NPC NEGATIVE PRESSURE SWITCH
OAT OUTSIDE AIR SENSOR
OFM OUTDOOR FAN MOTOR
PL PLUG
PT POWER TRANSFORMER
RAT RETURN AIR SENSOR
RC RUN CAPACITOR
RTUC ROOFTOP UNIT CONTROL
SE SENSE ELECTRODE
TB TERMINAL BLOCK
US UNLOADER SOLENOID
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 (CC1).
4. REMOVE J8 AT (CC1) TO INSTALL LOW AMBIENT ACCESSORY.
5. IF REQUIRED, ATTACH CRANKCASE HEATER ACCESSORY TO CC1 (L1) AND CC1 (L2).
6. COMPRESSOR MOTOR THERMALLY PROTECTED. ALL 3 PHASE MODELS ARE PROTECTED AGAINST PRIMARY SINGLE PHASING CONDITIONS.
7. TRANSFORMER FACTORY WIRED AS SHOWN BELOW, CHANGE PRIMARY VOLTAGE CONNECTIONS FOR ALTERNATE VOLTAGES, IF REQUIRED.
UNIT VOLTAGES - HZ TRANSFORMER TERM.
200/220-50HZ 200
208 - 60HZ 230
230 - 60HZ 230
380/415 - 50HZ 400
460 - 60HZ 460
575 - 60HZ 230
8. LOW VOLTAGE CIRCUIT IS N.E.C. CLASS 2 WITH A CLASS 2 TRANSFORMER, 24VAC 50/60 HZ SUPPLIED.
9. MOTOR FACTORY WIRED FOR CORRECT VOLTAGE.
10. REMOVE PL36 FOR ECONOMIZER ACCESSORY. PL34 AND PL36 LOCATED IN RETURN AIR SECTION.
11. CONNECT TO ECONOMIZER LOGIC MODULE.
WIRING INFORMATION
LINE VOLTAGE
-FACTORY STANDARD
-FACTORY OPTION
-FIELD INST ALLED
LOW VOLTAGE
-FACTORY STANDARD
-FACTORY OPTION
-FIELD INST ALLED
REPLACEMENT WIRE
-MUST BE THE SAME SIZE AND TYPE OF INSULATION AS ORIG INAL(105°C MIN.)
WARNING
-CABINET MUST BE PERMANENTLY GROUNDED AND CONFORM TO N.E.C. AND LOCAL NATIONAL WIRING REGULATIONS, AND LOCAL CODES AS APPLICABLE.
POWER SUPPLY
L3 L2 L1
DISC (OPTIONAL)
COMP. 1
COMP. 2
ECONOMIZER (OPT.)
POWER EXHAUST
PL34 PL38
PL40 PL36
PL43
PL44
PL42
PL45 PL3
PL35
MS (OPT)
575V
460V
230V
24VAC
DOOR INTERLOCK SWITCH
REMOTE SWITCH
OCCUPANCY RELAY
SMOKE DETECTOR RELAY
JUMPER
FLMS
SE
COS

**FIGURE 37**

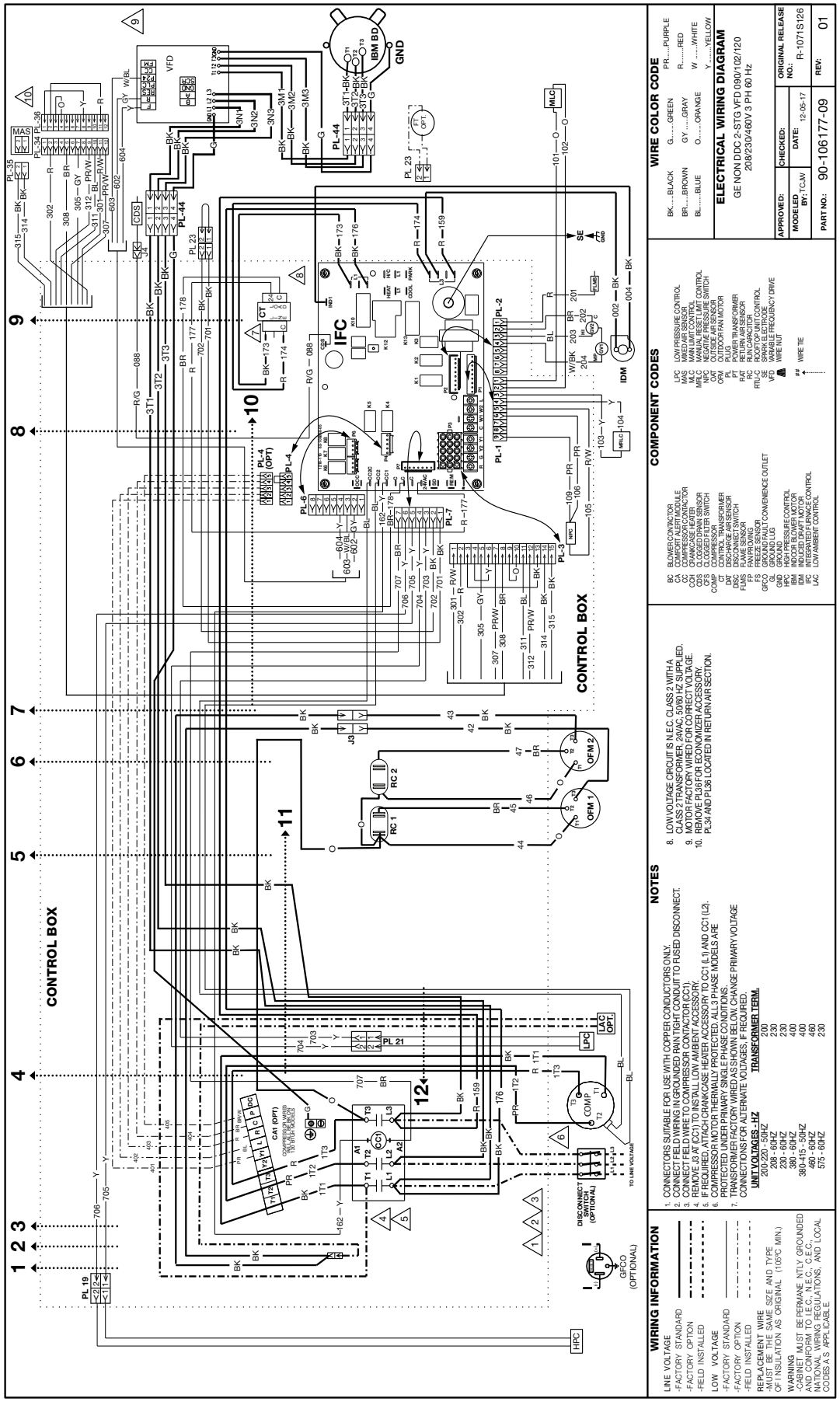

CONTROL BOX
IFC
IBM BD
GND
VFD
CONTROL BOX
WIRING INFORMATION
LINE VOLTAGE
-FACTORY STANDARD
-FACTORY OPTION
-FIELD INSTALLED
LOW VOLTAGE
-FACTORY STANDARD
-FACTORY OPTION
-FIELD INSTALLED
REPLACEMENT WIRE
MUST BE THE SAME SIZE AND TYPE
OR INSULATION AS ORIGINAL (105°C MIN.)
WARNING
CABINET MUST BE PERMANENTLY GROUNDED
AND CONFORM TO I.E.C., N.E.C., C.E.C.,
NATIONAL WIRING REGULATIONS, AND LOCAL
CODES AS APPLICABLE.
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 (CC1).
4. REMOVE JUMPER J8 AT (CC1) TO INSTALL LOW AMBIENT ACCESSORY.
5. IF REQUIRED, ATTACH CRANKCASE HEATER ACCESSORY TO (CC1 (L1) AND CC1 (L2).
6. COMPRESSOR MOTOR IS INTERNALLY PROTECTED. ALL 3 PHASE MODELS ARE
CONNECTED UNDER PARTIAL WINDING START CONDITIONS.
7. TRANSFORMER FACTORY WIRED AS SHOWN BELOW. CHANGE PRIMARY VOLTAGE
CONNECTIONS FOR ALTERNATE VOLTAGES, IF REQUIRED.
UNIT VOLTAGES - HZ TRANSFORMER TERM.
200-220 - 50HZ 200
208 - 60HZ 230
230 - 60HZ 230
380 - 60HZ 400
380-415 - 50HZ 400
460 - 60HZ 460
575 - 60HZ 230
8. LOW VOLTAGE CIRCUIT IS N.E.C. CLASS 2 WITH A
CLASS 2 TRANSFORMER, 24VAC, 50/60 HZ SUPPLIED.
9. MOTOR FACTORY WIRED FOR CORRECT VOLTAGE.
10. REMOVE PL36 FOR ECONOMIZER ACCESSORY.
PL34 AND PL36 LOCATED IN RETURN AIR SECTION.
COMPONENT CODES
BC BLOWER CONNECTOR
CA COMFORT ALERT MODULE
CC COMPRESSOR CONTACTOR
CCH CRANKCASE HEATER
CDS CLOGGED DRAIN SENSOR
CFS CLOGGED FILTER SWITCH
COMP COMPRESSOR
CT CONTROL TRANSFORMER
DAT DISCHARGE AIR SENSOR
DISC DISCONNECT SWITCH
FLMS FLAME SENSOR
FP FAN PROVING
FT POWER TRANSFORMER
GFCO GROUND FAULT CONVENIENCE OUTLET
GL GROUND LUG
GND GROUND
HPC HIGH PRESSURE CONTROL
IBM INDOOR BLOWER MOTOR
IDM OUTDOOR FAN MOTOR
IFC INTEGRATED FURNACE CONTROL
LAC LOW AMBIENT CONTROL
LPC LOW PRESSURE CONTROL
MAS MIXED AIR SENSOR
MAT MANUAL AIR CONTROL
MRS C MANUAL RESET LIMIT CONTROL
NPC NEGATIVE PRESSURE SWITCH
OAS OUTDOOR AIR SENSOR
OFM OUTDOOR FAN MOTOR
PL PLUG
PT POWER TRANSFORMER
RAT RETURN AIR SENSOR
RC RUN CAPACITOR
RTC ROOM THERMOSTAT CONTROL
SE SPARK ELECTRODE
VFD VARIABLE FREQUENCY DRIVE
WIRE NUT
WIRE TIE
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 NON DDC 2-STG VFD 090/102/120
208/230/460V 3 PH 60 Hz
APPROVED:
MODELED BY: TCJW
CHECKED:
DATE: 12-05-17
ORIGINAL RELEASE NO.: R-1071S126
PART NO.: 90-106177-09
REV: 01

**FIGURE 38**

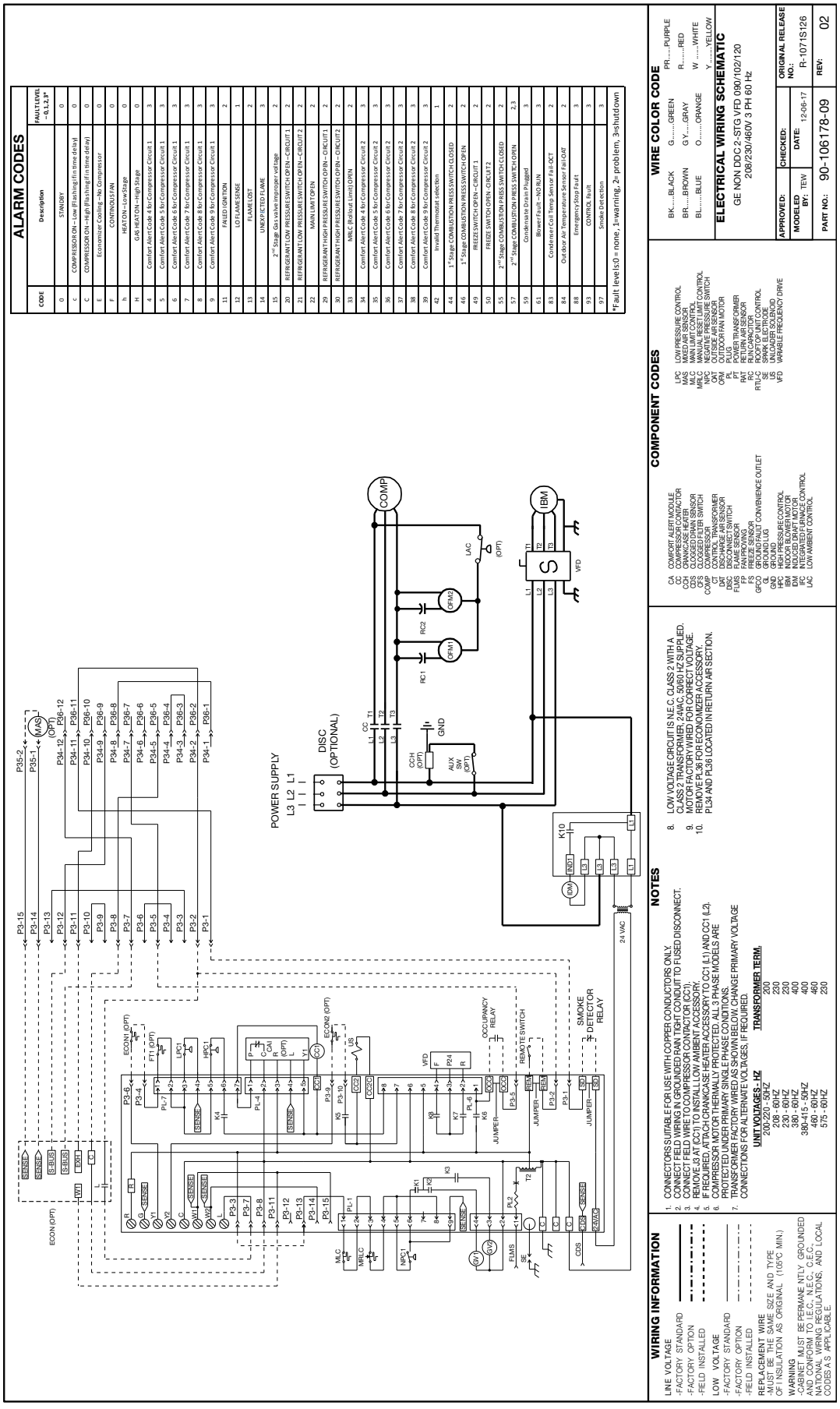

ALARM CODES
CODE
Description
FAULT LEVEL –0,1,2,3*
0 STANDBY 0
C COMPRESSOR ON – Low (Flashing if in time delay) 0
C COMPRESSOR ON – High (Flashing if in time delay) 0
E Economizer Cooling –No Compressor 0
F CONTINUOUS FAN 0
h HEATON – Low Stage 0
H GAS HEATON – High Stage 0
4 Comfort Alert Code 4 for 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 LOST FLAME SENSE 1
13 FLAME LOST 2
14 UNEXPECTED FLAME 3
15 2nd Stage Gas valve improper voltage 3
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 – CIRCUIT1 2
30 REFRIGERANT HIGH PRESSURE SWITCH OPEN – CIRCUIT2 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 1st Stage COMBUSTION PRESS SWITCH CLOSED 2
46 1st Stage COMBUSTION PRESS SWITCH OPEN 2
49 FREEZE SWITCH OPEN – CIRCUIT 1 2
50 FREEZE SWITCH OPEN – CIRCUIT 2 2
55 2nd Stage COMBUSTION PRESS SWITCH CLOSED 2
57 2nd 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 level:0 = none; 1=warning, 2= problem, 3=shutdown
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 NON DDC 2-STG VFD 090/102/120
208/230/460V 3 PH 60 Hz
APPROVED:
CHECKED:
ORIGINAL RELEASE NO.: R-1071S126
MODELED BY: TEW
DATE: 12-06-17
PART NO.: 90-106178-09
REV: 02
COMPONENT CODES
CA COMFORT ALERT MODULE
CC COMPRESSOR CONTACTOR
CCH CRANKCASE HEATER
CDS CLOGGED DRAIN SENSOR
CFS CLOGGED FILTER SWITCH
COM CONDENSATE OVERFLOW
CT CONTROL TRANSFORMER
DAT DISCHARGE AIR SENSOR
DSC DISCONNECT SWITCH
FLMS FLAME SENSOR
FP FAN PROVING
FS FREEZE SENSOR
GFCO GROUND FAULT CONVENIENCE OUTLET
GL GROUND LUG
GSO GAS SHUT OFF SOLENOID
HPC HIGH PRESSURE CONTROL
IBM INDOOR BLOWER MOTOR
ICM INTEGRATED CONTROL MODULE
IFC INTEGRATED FURNACE CONTROL
LAC LOW AMBIENT CONTROL
LPC LOW PRESSURE CONTROL
MAS MIXED AIR SENSOR
MLC MAIN LIMIT CONTROL
MRLC MANUAL RESET LIMIT CONTROL
NPC NORMALLY PRESSURE SWITCH
OAT OUTSIDE AIR SENSOR
OFM OUTDOOR FAN MOTOR
PL PLUG
PT POWER TRANSFORMER
RAT RETURN AIR SENSOR
RC RELAY COIL
RTU-C ROOFTOP UNIT CONTROL
SE SPARK ELECTRODE
SS SMOKE SENSOR
VFD VARIABLE FREQUENCY DRIVE
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 (CC) TERMINAL.
4. REMOVE J5 AT DCP TO INSTALL LOW AMBIENT ACCESSORY.
5. IF REQUIRED, ATTACH CRANKCASE HEATER ACCESSORY TO CC1 (L1) AND CC1 (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 CONNECTIONS FOR ALTERNATE VOLTAGES, IF REQUIRED.
UNIT VOLTAGES - HZ / TRANSFORMER TERM.
200-220 - 50HZ 200
208 - 60HZ 230
230 - 60HZ 230
380 - 50HZ 400
380-415 - 50HZ 400
460 - 60HZ 460
575 - 60HZ 230
8. LOW VOLTAGE CIRCUIT IS N.E.C. CLASS 2 WITH A CLASS 2 TRANSFORMER, 24VAC, 50/60 HZ SUPPLIED.
9. MOTOR FACTORY WIRED FOR CORRECT VOLTAGE.
10. REMOVE PL36 FOR ECONOMIZER ACCESSORY. PL34 AND PL36 LOCATED IN RETURN AIR SECTION.
WIRING INFORMATION
LINE VOLTAGE
-FACTORY STANDARD
-FACTORY OPTION
-FIELD INSTALLED
LOW VOLTAGE
-FACTORY STANDARD
-FACTORY OPTION
-FIELD INSTALLED
REPLACEMENT WIRE
-MUST BE THE SAME SIZE AND TYPE OF INSULATION AS ORIGINAL (105°C MIN.)
WARNING
-CABINET MUST BE PERMANENTLY GROUNDED AND CONFORM TO LOCAL CODES OR, IN THE ABSENCE OF LOCAL CODES, WITH THE NATIONAL ELECTRICAL CODE, ANSI/NFPA 70 OR THE CANADIAN ELECTRICAL CODE, CSA C22.1
-USE COPPER CONDUCTORS ONLY
-UNIT MUST BE GROUNDED IN ACCORDANCE WITH NATIONAL AND LOCAL CODES
-DISCONNECT ALL POWER BEFORE SERVICING
-MULTIPLE POWER SOURCES MAY BE PRESENT
-DO NOT USE GAS PIPING AS AN ELECTRICAL GROUND
-VERIFY PROPER OPERATION AFTER SERVICING
-LABEL ALL WIRES PRIOR TO DISCONNECTION WHEN SERVICING
-VERIFY PROPER VOLTAGE AND FREQUENCY
POWER SUPPLY
L3 L2 L1
DISC (OPTIONAL)
CC
T1 T2 T3
L1 L2 L3
RC1
RC2
GND
CCH (OPT)
AUX SW (OPT)
COMP
OFM1
OFM2
LAC
(OPT)
IBM
VFD
K10
24 VAC
ECON (OPT)
SENSE
S-BUS
EXV1
V01
R
L
P3-15
P3-14
P3-13
P3-12
P3-11
P3-10
P3-9
P3-8
P3-7
P3-6
P3-5
P3-4
P3-3
P3-2
P3-1
P35-2
P35-1
(MAS)
(OPT)
P34-12
P34-11
P34-10
P34-9
P34-8
P34-7
P34-6
P34-5
P34-4
P34-3
P34-2
P34-1
P36-12
P36-11
P36-10
P36-9
P36-8
P36-7
P36-6
P36-5
P36-4
P36-3
P36-2
P36-1
ECON1 (OPT)
FTL (OPT)
LPC1
HPC1
ECON2 (OPT)
Y1
US
OCC1
OCC2
OCCUPANCY RELAY
REMOTE SWITCH
REM1
REM2
SMOKE DETECTOR RELAY
SD1
SD2
JUMPER
K1
K2
K3
K4
K5
K6
K7
K8
PL1
PL2
PL4
PL6
PL7
T2
MLC
MRLC
FLMS
SE
CDS
24VAC
G
Y1
Y2
C
W1
W2
O
P3-3
P3-8
P2-11
P3-12
P3-13
P3-14
P3-15
P24
F
R
VFD
P3-10
P3-5
P3-2
P3-1
P2-5
P2-4
P2-3
P2-2
P2-1
P1-7
P1-6
P1-5
P1-4
P1-3
P1-2
P1-1
P3-6
P3-4
P3-7
P3-9
P3-11
P3-13
P3-15
P3-8
P3-14
P3-12

**FIGURE 39**

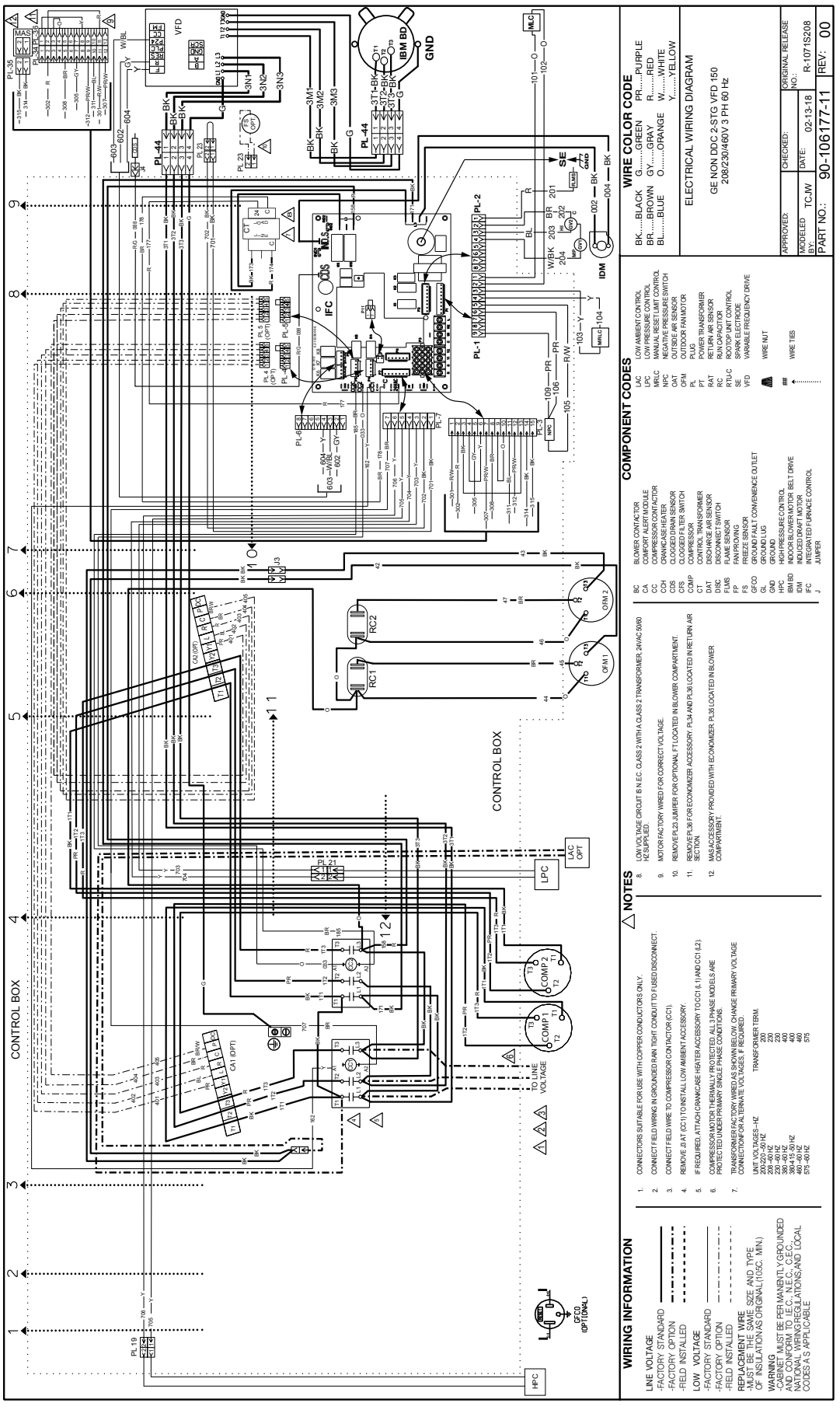

WIRE COLOR CODE
BK....BLACK G.....GREEN PR....PURPLE
BR....BROWN GY....GRAY R.....RED
BL.....BLUE O.....ORANGE W.....WHITE
Y.....YELLOW
ELECTRICAL WIRING DIAGRAM
GE NON DDC 2 STG VFD 150
208/230/460V 3 PH 60 Hz
APPROVED: CHECKED: ORIGINAL RELEASE NO.:
MODELED BY: TCJW DATE: 02-13-18 R-1071S208
PART NO.: 90-106177-11 REV: 00
COMPONENT CODES
WIRING INFORMATION
NOTES
CONTROL BOX
VFD
IBM BD
GND
IFC
CDS
PL-1
PL-2
SE
IDM
MLC
LPC
LAC OPT
HPC
GFCO (OPTIONAL)
TO LINE VOLTAGE

**FIGURE 40**

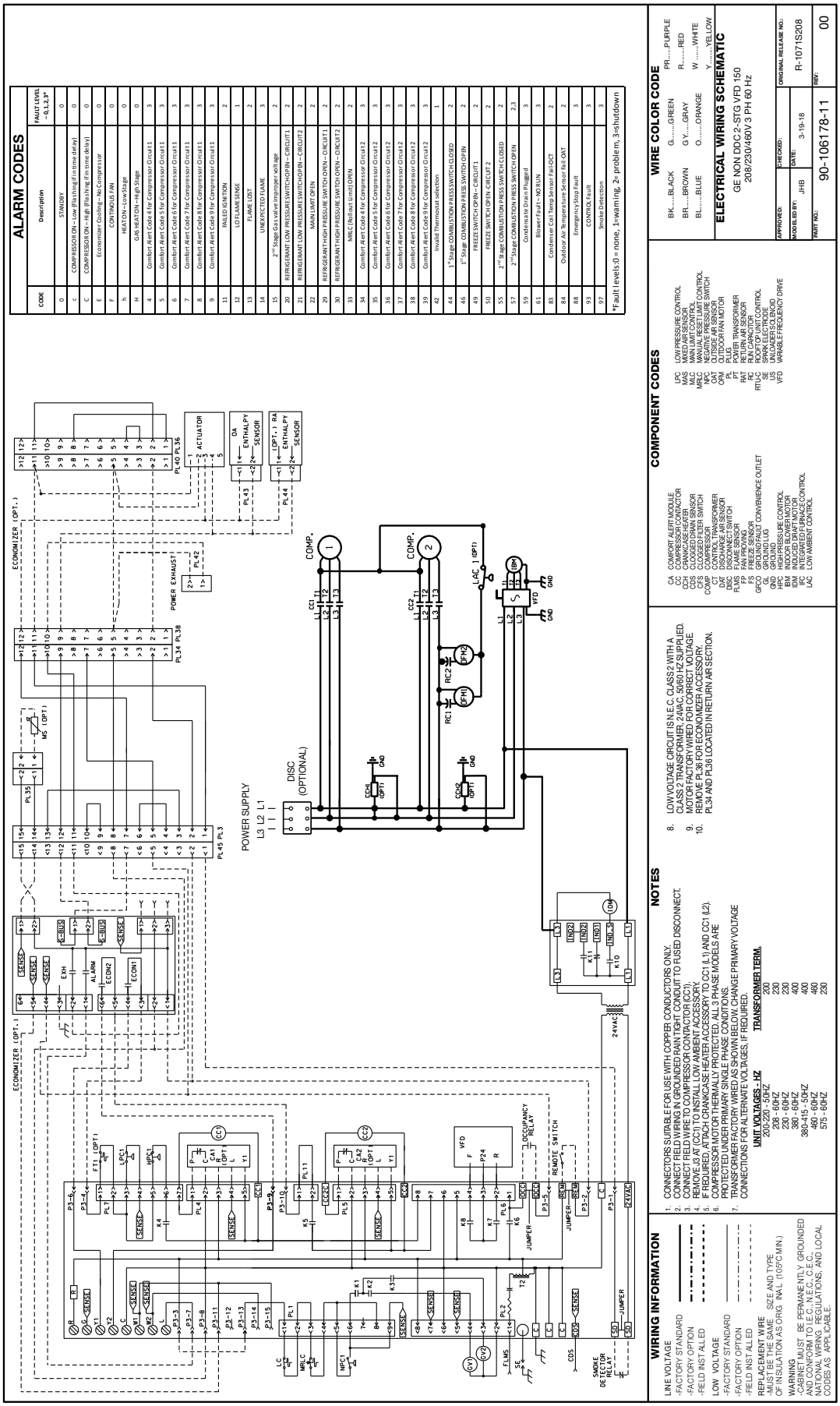

ALARM CODES
CODE
Description
FAULT LEVEL –0,1,2,3*
0 STANDBY 0
C COMPRESSOR ON – Low (Flashing if in time delay) 0
C COMPRESSOR ON – High (Flashing if in time delay) 0
E Economizer Cooling – No Compressor 0
F CONTROLS FAN 0
h HEATON – Low Stage 0
H GAS HEATON – High Stage 0
4 Comfort Alert Code 4 for Compressor Circuit1 3
5 Comfort Alert Code 5 for Compressor Circuit1 3
6 Comfort Alert Code 6 for Compressor Circuit1 3
7 Comfort Alert Code 7 for Compressor Circuit1 3
8 Comfort Alert Code 8 for Compressor Circuit1 3
9 Comfort Alert Code 9 for Compressor Circuit1 3
11 FAILED IGNITION 2
12 LOT FLAME SENSE 1
13 FLAME LOST 2
14 UNEXPECTED FLAME 3
15 2nd Stage Gas valve improper voltage 2
20 REFRIGERANT LOW PRESSURE SWITCH OPEN – CIRCUIT1 2
21 REFRIGERANT LOW PRESSURE SWITCH OPEN – CIRCUIT2 2
22 MAIN LIMIT OPEN 2
29 REFRIGERANT HIGH PRESSURE SWITCH OPEN – CIRCUIT1 2
30 REFRIGERANT HIGH PRESSURE SWITCH OPEN – CIRCUIT2 2
33 MRLC (Roll out Limit) OPEN 2
34 Comfort Alert Code 4 for Compressor Circuit2 3
35 Comfort Alert Code 5 for Compressor Circuit2 3
36 Comfort Alert Code 6 for Compressor Circuit2 3
37 Comfort Alert Code 7 for Compressor Circuit2 3
38 Comfort Alert Code 8 for Compressor Circuit2 3
39 Comfort Alert Code 9 for Compressor Circuit2 3
42 Invalid Thermostat selection 1
44 1st Stage COMBUSTION PRESS SWITCH CLOSED 2
46 1st Stage COMBUSTION PRESS SWITCH OPEN 2
49 FREEZE SWITCH OPEN – CIRCUIT 1 2
50 FREEZE SWITCH OPEN – CIRCUIT 2 2
55 2nd Stage COMBUSTION PRESS SWITCH CLOSED 2
57 2nd 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
COMPONENT CODES
CA COMFORT ALERT MODULE
CC1 COMPRESSOR CONTACTOR
CC2 COMPRESSOR CONTACTOR
CDS CLOGGED DRAIN SENSOR
CFS CLOGGED FILTER SWITCH
COMP1,2 COMPRESSOR
CT CONTROL TRANSFORMER
DAT DISCHARGE AIR SENSOR
DISC DISCONNECT SWITCH
FLMS FLAME SENSOR
FR FAN PROVING
FU1 FUSE, CONTROL POWER
GFCI GROUND FAULT CONVENIENCE OUTLET
GL GROUND LUG
GND GROUND
HPC HIGH PRESSURE CONTROL
IDM INDOOR BLOWER MOTOR
IDR INDOOR BLOWER RELAY
IFC INTEGRATED FURNACE CONTROL
LAC LOW AMBIENT CONTROL
LPC LOW PRESSURE CONTROL
MRLC MANUAL RESET LIMIT
MLC MAIN LIMIT CONTROL
MRLC MANUAL RESET LIMIT CONTROL
NPC NORMAL PRESSURE SWITCH
OAT OUTSIDE AIR SENSOR
ODM OUTDOOR FAN MOTOR
PL PLUG
PT POWER TRANSFORMER
RAT RETURN AIR SENSOR
RE RELAY, ECONOMIZER
RTUC ROOFTOP UNIT CONTROL
SE SPARK ELECTRODE
SS SMOKE SENSOR
VFD VARIABLE FREQUENCY DRIVE
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 NON DDC 2-STG VFD 150
208/230/460V 3 PH 60 Hz
APPROVED: CHECKED: ORIGINAL RELEASE NO.
MODIFIED BY: JHB DATE: 3-19-18 R-1071S208
PART NO.: 90-106178-11 REV: 00
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 (CC1).
4. REMOVE JL3 AT CC1 TO INSTALL LOW AMBIENT ACCESSORY.
5. IF REQUIRED, ATTACH CRANKCASE HEATER ACCESSORY TO CC1 (L1) AND CC1 (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 CONNECTIONS FOR ALTERNATE VOLTAGES, IF REQUIRED.
UNIT VOLTAGES - HZ TRANSFORMER TERM.
200/220 - 50HZ 200
208 - 60HZ 230
230 - 60HZ 230
380 - 50HZ 400
380-416 - 50HZ 400
460 - 60HZ 460
575 - 60HZ 230
8. LOW VOLTAGE CIRCUIT IS N.E.C. CLASS 2 WITH A CLASS 2 TRANSFORMER, 24VAC, 50/60 HZ SUPPLIED.
9. MOTOR FACTORY WIRED FOR CORRECT VOLTAGE
10. REMOVE PL36 FOR ECONOMIZER ACCESSORY. PL34 AND PL36 LOCATED IN RETURN AIR SECTION.
WIRING INFORMATION
LINE VOLTAGE
-FACTORY STANDARD
-FACTORY OPTION
-FIELD INST ALLED
LOW VOLTAGE
-FACTORY STANDARD
-FACTORY OPTION
-FIELD INST ALLED
REPLACEMENT WIRE
-MUST BE THE SAME SIZE AND TYPE OF INSULATION AS ORIG INAL (105°C MIN.)
WARNING
-CABINET MUST BE PERMANENTLY GROUNDED AND CONFORM TO I.E.C., N.E.C., C.E.C., NATIONAL WIRING REGULATIONS, AND LOCAL CODES AS APPLICABLE.
ECONOMIZER (OPT.)
POWER SUPPLY
L3 L2 L1
DISC. (OPTIONAL)
COMP. 1
COMP. 2
CC1
CC2
CCH1 (OPT)
CCH2 (OPT)
LAC 1 (OPT)
VFD
GND
POWER EXHAUST
PL40 PL36
PL43
PL44
PL45 PL3
PL34 PL38
PL35
MS (OPT)
OA ENTHALPY SENSOR
(OPT.) RA ENTHALPY SENSOR
ACTUATOR
LC
MRLC
NPC1
SE
FLMS
COS
SMOKE DETECTOR RELAY
IDM
IDR
K1
K3
K4
K5
K6
K7
K8
K9
K10
T1
T2
T3
T4
FU1 (OPT.)
LPC1
HPC1
ALARM
EXH
ECON1
ECON2
SENSE
S-BUS
DEHUMIDIFICATION RELAY
REMOTE SWITCH
JUMPER
24VAC
P3-1
P3-2
P3-3
P3-4
P3-5
P3-6
P3-7
P3-8
P3-9
P3-10
P3-11
P3-12
P3-13
P3-14
P3-15
PL1
PL2
PL3
PL4
PL5
PL6
PL7
PL11
CCH1
CCH2
CC1
CC2
CC3
CC4
CC5
CC6
CC7
CC8
CC9
CC10
CC11
CC12
CC13
CC14
CC15
CC16
CC17
CC18
CC19
CC20
CC21
CC22
CC23
CC24
CC25
CC26
CC27
CC28
CC29
CC30
CC31
CC32
CC33
CC34
CC35
CC36
CC37
CC38
CC39
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**FIGURE 41**

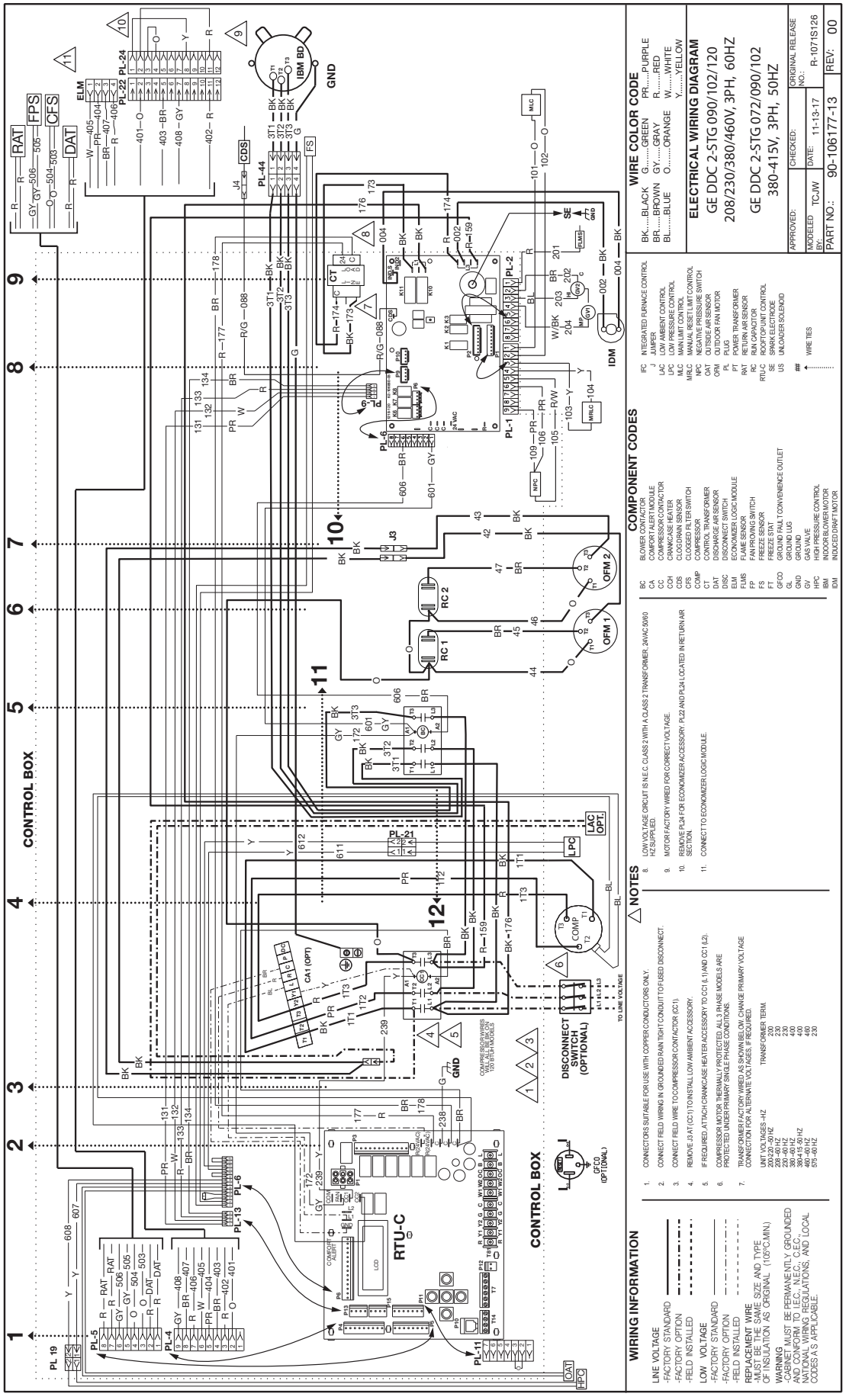
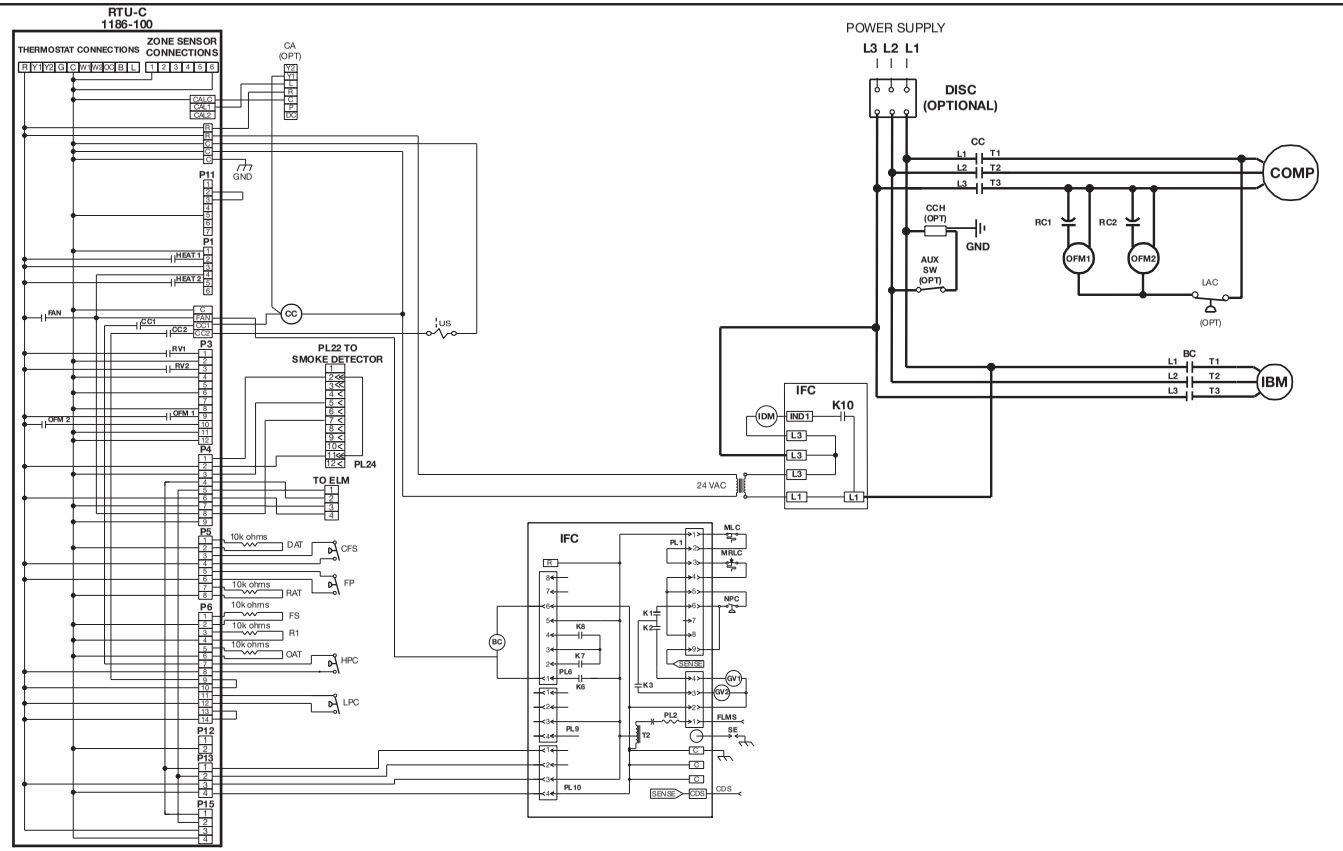

CONTROL BOX
CONTROL BOX
RTU-C
WIRING INFORMATION
NOTES
COMPONENT CODES
WIRE COLOR CODE
ELECTRICAL WIRING DIAGRAM
GE DDC 2-STG 090/102/120
208/230/380/460V, 3PH, 60HZ
GE DDC 2-STG 072/090/102
380-415V, 3PH, 50HZ
PART NO.: 90-106177-13
REV: 00
MODELED TC-JW
DATE: 11-13-17
ORIGINAL RELEASE
R-1071S126

FIGURE 42




## 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 | CONTINOUS 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 | 2nd Stage Gas valve improper voltage | 2 |
| 20 | REFRIGERANT LOW PRESSURE SWITCH OPEN – CIRCUIT1 | 2 |
| 21 | REFRIGERANT LOW PRESSURE SWITCH OPEN – CIRCUIT2 | 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 | 1st Stage COMBUSTION PRESS SWITCH CLOSED | 2 |
| 46 | 1st Stage COMBUSTION PRESS SWITCH OPEN | 2 |
| 49 | FREEZE SWITCH OPEN – CIRCUIT 1 | 2 |
| 50 | FREEZE SWITCH OPEN -CIRCUIT 2 | 2 |
| 55 | 2nd Stage COMBUSTION PRESS SWITCH CLOSED | 2 |
| 57 | 2nd 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

## WIRING INFORMATION

LINE VOLTAGE
-FACTORY STANDARD
-FACTORY OPTION
-FIELD INSTALLED

LOW VOLTAGE
-FACTORY STANDARD
-FACTORY OPTION
-FIELD INSTALLED

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

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

## 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 (CC1).
4. REMOVE J3 AT (CC1) TO INSTALL LOW AMBIENT ACCESSORY.
5. IF REQUIRED, ATTACH CRANKCASE HEATER ACCESSORY TO CC1 (L1) AND CC1 (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 CONNECTIONS FOR ALTERNATE VOLTAGES, IF REQUIRED.

| UNIT VOLTAGES - HZ | TRANSFORMER TERM. |
|---|---|
| 200-220 - 50HZ | 200 |
| 208 - 60HZ | 230 |
| 230 - 60HZ | 230 |
| 380 - 60HZ | 400 |
| 380-415 - 50HZ | 400 |
| 460 - 60HZ | 460 |
| 575 - 60HZ | 575 |

8. LOW VOLTAGE CIRCUIT IS N.E.C. CLASS 2 WITH A CLASS 2 TRANSFORMER, 24VAC, 50/60 HZ SUPPLIED.
9. MOTOR FACTORY WIRED FOR CORRECT VOLTAGE.
10. REMOVE PL24 FOR ECONOMIZER ACCESSORY. PL22 AND PL24 LOCATED IN RETURN AIR SECTION.

## COMPONENT CODES

| | |
|---|---|
| BC | BLOWER CONTACTOR |
| CA | COMFORT ALERT MODULE |
| CC | COMPRESSOR CONTACTOR |
| CCH | CRANKCASE HEATER |
| CDS | CLOGGED DRAIN SENSOR |
| CFS | CLOGGED FILTER SWITCH |
| COMP | COMPRESSOR |
| CT | CONTROL TRANSFORMER |
| DAT | DISCHARGE AIR SENSOR |
| DISC | DISCONNECT SWITCH |
| FLMS | FLAME SENSOR |
| FP | FAN PROVING |
| FS | FREEZE SENSOR |
| GFCO | GROUND FAULT CONVENIENCE OUTLET |
| GL | GROUND LUG |
| GND | GROUND |
| GV | GAS VALVE |
| HPC | HIGH PRESSURE CONTROL |
| IBM | INDOOR BLOWER MOTOR |
| IDM | INDUCED DRAFT MOTOR |
| IFC | INTEGRATED FURNACE CONTROL |
| LAC | LOW AMBIENT CONTROL |
| LPC | LOW PRESSURE CONTROL |
| MAS | MIXED AIR SENSOR |
| MLC | MAIN LIMIT CONTROL |
| MRLC | MANUAL RESET LIMIT CONTROL |
| NPC | NEGATIVE PRESSURE SWITCH |
| OAT | OUTSIDE AIR SENSOR |
| OFM | OUTDOOR FAN MOTOR |
| PL | PLUG |
| PT | POWER TRANSFORMER |
| RAT | RETURN AIR SENSOR |
| RC | RUN CAPACITOR |
| RTU-C | ROOFTOP UNIT CONTROL |
| SE | SPARK ELECTRODE |
| US | UNLOADER SOLENOID |

## WIRE COLOR CODE

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

## ELECTRICAL WIRING SCHEMATIC

GE DDC 2 STG 090/102/120
208/230/380/460V, 3PH, 60HZ

GE DDC 2 STG 072/090/102
380-415V, 3PH, 50HZ

| APPROVED: | CHECKED: | ORIGINAL RELEASE NO.: |
|---|---|---|
| MODELED BY: TCJW | DATE: 11-14-17 | R-1071S126 |
| PART NO.: 90-106178-13 | | REV: 01 |

**FIGURE 43**

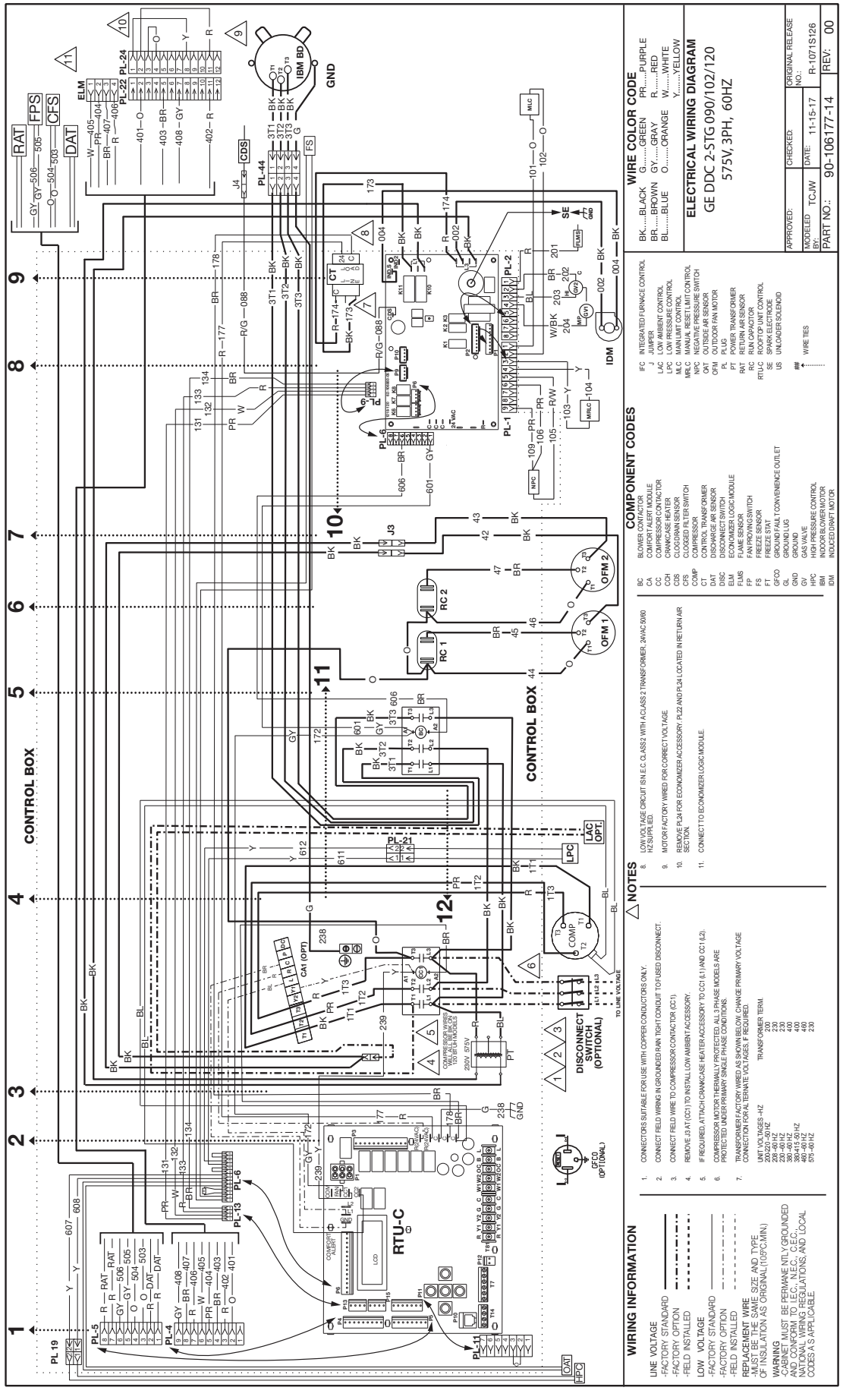
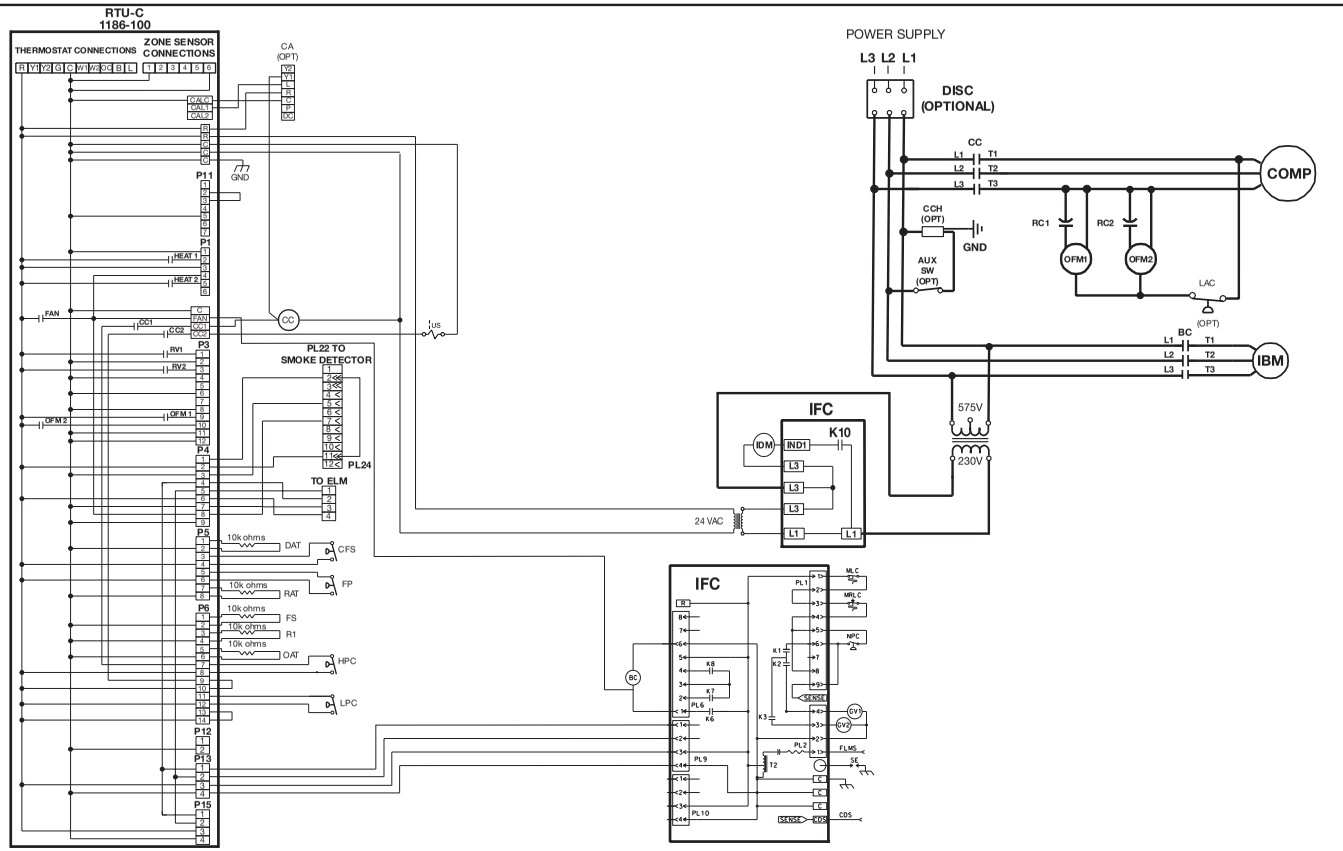

CONTROL BOX
RTU-C
WIRING INFORMATION
NOTES
COMPONENT CODES
WIRE COLOR CODE
ELECTRICAL WIRING DIAGRAM
GE DDC 2-STG 090/102/120
575V, 3PH, 60HZ
MODEL# TC-JW
PART NO.: 90-106177-14
REV: 00
DISCONNECT SWITCH (OPTIONAL)
GFCI (OPTIONAL)
GND
IBM BD
IDM
OFM 1
OFM 2
RC 1
RC 2
COMP
PT
LPC
LAC OPT.
CA1 (OPT)
TO LINE VOLTAGE

FIGURE 44




## ALARM CODES

| CODE | Description | FAULT LEVEL –0,1,2,3* |
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| 0 | STANDBY | 0 |
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| C | COMPRESSOR ON – High (Flashing if in time delay) | 0 |
| E | Economizer Cooling – No Compressor | 0 |
| F | CONTINOUS 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 | 2ND Stage Gas valve improper voltage | 2 |
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| 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 | 1ST Stage COMBUSTION PRESSSWITCH CLOSED | 2 |
| 46 | 1ST Stage COMBUSTION PRESS SWITCH OPEN | 2 |
| 49 | FREEZE SWITCH OPEN – CIRCUIT 1 | 2 |
| 50 | FREEZE SWITCH OPEN -CIRCUIT 2 | 2 |
| 55 | 2ND Stage COMBUSTION PRESSSWITCH CLOSED | 2 |
| 57 | 2ND Stage COMBUSTION PRESS SWITCH OPEN | 2,3 |
| 59 | Condensate Drain Plugged | 3 |
| 61 | Blower Fault – NO RUN | 3 |
| 83 | Condenser Coil Temp Sens or 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

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-FIELD INSTALLED

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5. IF REQUIRED, ATTACH CRANKCASE HEATER ACCESSORY TO CC1 (L1) AND CC1 (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 CONNECTIONS FOR ALTERNATE VOLTAGES, IF REQUIRED.

| UNIT VOLTAGES - HZ | TRANSFORMER TERM. |
|---|---|
| 200-220 - 50HZ | 200 |
| 208 - 60HZ | 230 |
| 230 - 60HZ | 230 |
| 380 - 60HZ | 400 |
| 380-415 - 50HZ | 400 |
| 460 - 60HZ | 460 |
| 575 - 60HZ | 230 |

8. LOW VOLTAGE CIRCUIT IS N.E.C. CLASS 2 WITH A CLASS 2 TRANSFORMER, 24VAC, 50/60 HZ SUPPLIED.
9. MOTOR FACTORY WIRED FOR CORRECT VOLTAGE.
10. REMOVE PL24 FOR ECONOMIZER ACCESSORY. PL22 AND PL24 LOCATED IN RETURN AIR SECTION.

## COMPONENT CODES

| | |
|---|---|
| BC | BLOWER CONTACTOR |
| CA | COMFORT ALERT MODULE |
| CC | COMPRESSOR CONTACTOR |
| CCH | CRANKCASE HEATER |
| CDS | CLOGGED DRAIN SENSOR |
| CFS | CLOGGED FILTER SWITCH |
| COMP | COMPRESSOR |
| CT | CONTROL TRANSFORMER |
| DAT | DISCHARGE AIR SENSOR |
| DISC | DISCONNECT SWITCH |
| FLMS | FLAME SENSOR |
| FP | FAN PROVING |
| FS | FREEZE SENSOR |
| GFCO | GROUND FAULT CONVENIENCE OUTLET |
| GL | GROUND LUG |
| GND | GROUND |
| GV | GAS VALVE |
| HPC | HIGH PRESSURE CONTROL |
| IBM | INDOOR BLOWER MOTOR |
| IDM | INDUCED DRAFT MOTOR |
| IFC | INTEGRATED FURNACE CONTROL |
| LAC | LOW AMBIENT CONTROL |
| LPC | LOW PRESSURE CONTROL |
| MAS | MIXED AIR SENSOR |
| MLC | MAIN LIMIT CONTROL |
| MRLC | MANUAL RESET LIMIT CONTROL |
| NPC | NEGAITVE PRESSURE SWITCH |
| OAT | OUTSIDE AIR SENSOR |
| OFM | OUTDOOR FAN MOTOR |
| PL | PLUG |
| PT | POWER TRANSFORMER |
| RAT | RETURN AIR SENSOR |
| RC | RUN CAPACITOR |
| RTU-C | ROOFTOP UNIT CONTROL |
| SE | SPARK ELECTRODE |
| US | UNLOADER SOLENOID |

## WIRE COLOR CODE

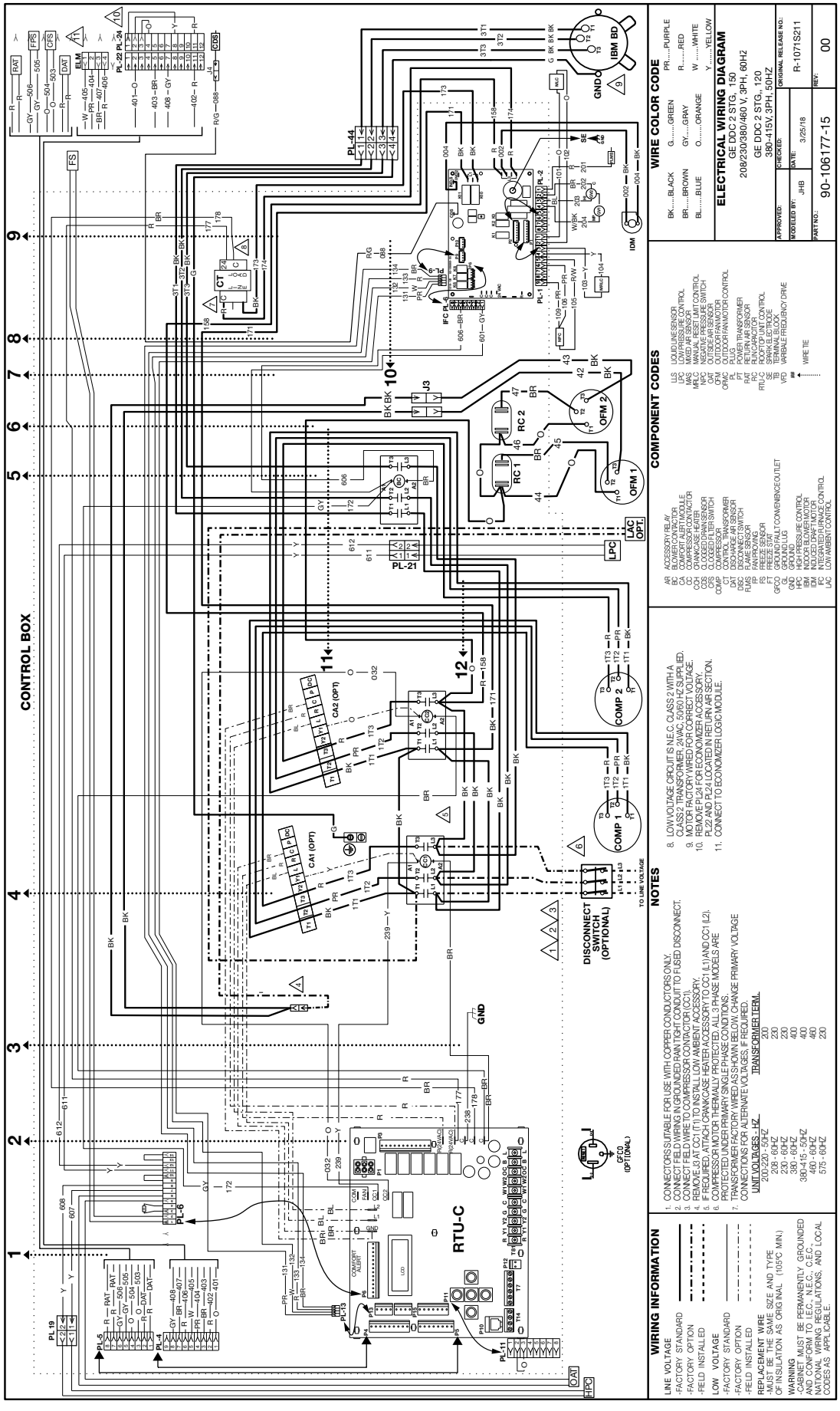
| | | |
|---|---|---|
| BK.....BLACK | G.....GREEN | PR.....PURPLE |
| BR.....BROWN | GY .....GRAY | R.....RED |
| BL.....BLUE | O.....ORANGE | W .....WHITE |
| | | Y .....YELLOW |

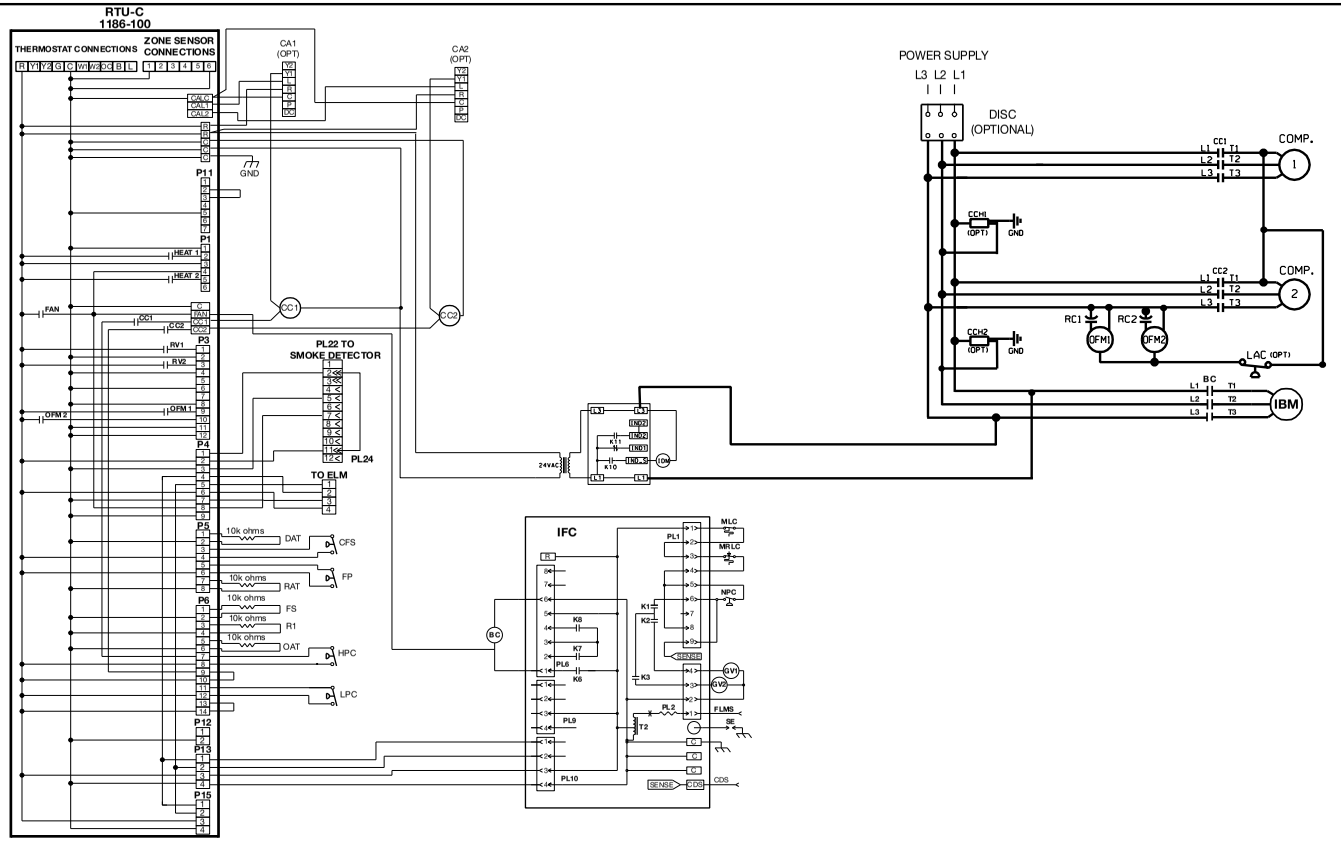
## ELECTRICAL WIRING SCHEMATIC

GE DDC 2-STG 090/102/120
575V, 3PH, 60HZ

| APPROVED: | CHECKED: | ORIGINAL RELEASE NO.: |
|---|---|---|
| MODELED BY: TCJW | DATE: 11-20-17 | R-1071S126 |
| PART NO.: 90-106178-14 | | REV: 01 |

**FIGURE 45**


CONTROL BOX
RTU-C
IBM BD
IDM
IFC
IFO
COMP 1
COMP 2
RC 1
RC 2
OFM 1
OFM 2
CA1 (OPT)
CA2 (OPT)
DISCONNECT SWITCH (OPTIONAL)
GFCI (OPTIONAL)
GND
PL-1
PL-2
PL-4
PL-5
PL-6
PL-11
PL-13
PL-19
PL-21
PL-22 24
PL-44
LAC OPT.
LPC
LPH
FPC
OAT
FS
FPS
CFS
DAT
ELM
CDS
SE
CT
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 2 STG, 150
208/230/380/460 V, 3PH, 60HZ
GE DDC 2 STG, 120
380-415V, 3PH, 50HZ
APPROVED:
MODELED BY: JHB
CHECKED:
DATE: 3/25/18
ORIGINAL RELEASE NO.: R-1071S211
PART NO.: 90-106177-15
REV: 00
COMPONENT CODES
AR ACCESSORY RELAY
BC BLOWER CONTACTOR
FT FREEZE STAT
CC COMPRESSOR CONTACTOR
CCH CRANKCASE HEATER
CPS CLOGGED PIPE SWITCH
CSR CLOSED LOOP RELAY
COMP COMPRESSOR
CT CONTROL TRANSFORMER
DFT DUCT FREEZE STAT
DISC DISCONNECT SWITCH
FLMS FLAME SENSOR
FS FREEZE SENSOR
FT FREEZE STAT
GFCI GROUND FAULT CONVENIENCE OUTLET
GL GROUND LUG
GND GROUND
HPC HIGH PRESSURE CONTROL
IBM INDOOR BLOWER MOTOR
IDM INDUCED DRAFT MOTOR
IFC INDOOR FAN CONTROL
LAC LOW AMBIENT CONTROL
LLS LIQUID LINE SENSOR
LPC LOW PRESSURE CONTROL
MAS MIXED AIR SENSOR
MRLC MANUAL RESET LIMIT CONTROL
MSLC MODULATING SLIDE SWITCH
OAT OUTSIDE AIR SENSOR
OFM OUTDOOR FAN MOTOR
OPAC OUTDOOR FAN MOTOR CONTROL
PL PLUG
PT POWER TRANSFORMER
RAT RETURN AIR SENSOR
RC RELAY COIL
RTU-C ROOFTOP UNIT CONTROL
SE SPARK ELECTRODE
SS SPARK SENSOR
VFD VARIABLE FREQUENCY DRIVE
## WIRE TIE
NOTES
1. CONNECTORS SUITABLE FOR USE WITH COPPER CONDUCTORS ONLY.
2. CONNECT FIELD WIRING IN GROUNDED RAINTIGHT CONDUIT TO FUSED DISCONNECT.
3. CONNECT FIELD WIRE TO COMPRESSOR CONTACTOR (CC1).
4. REMOVE J3 AT CC1 (T1) TO INSTALL LOW AMBIENT ACCESSORY.
5. IF REQUIRED, ATTACH CRANKCASE HEATER ACCESSORY TO CC1 (L1) AND CC1 (L2).
6. COMPRESSOR MOTOR THERMALLY PROTECTED. ALL 3 PHASE MODELS ARE PROTECTED UNDER PRIMARY SINGLE PHASE CONDITIONS.
7. TRANSFORMER IS FACTORY WIRED FOR HIGHEST VOLTAGE. TO CHANGE PRIMARY VOLTAGE CONNECTIONS FOR ALTERNATE VOLTAGES, IF REQUIRED.
LINE VOLTAGES - HZ TRANSFORMER TERM.
200-220 - 50HZ 200
208 - 60HZ 230
230 - 60HZ 230
380 - 60HZ 400
380-415 - 50HZ 400
460 - 60HZ 460
575 - 60HZ 230
8. LOW VOLTAGE CIRCUIT IS N.E.C. CLASS 2 WITH A CLASS 2 TRANSFORMER, 24 VAC, 50/60 HZ, SUPPLIED.
9. MOTOR FACTORY WIRED FOR CORRECT VOLTAGE.
10. REMOVE PL24 FOR ECONOMIZER ACCESSORY. PL22 AND PL24 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
-MUST BE THE SAME SIZE AND TYPE OF INSULATION AS ORIGINAL (105°C MIN.)
WARNING
-CABINET MUST BE PERMANENTLY GROUNDED AND CONFORM TO N.E.C. AND LOCAL NATIONAL WIRING REGULATIONS, AND LOCAL CODES AS APPLICABLE.




## 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 | CONTINOUS 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 | 2nd 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 | 1st Stage COMBUSTION PRESSS WITCH CLOSED | 2 |
| 46 | 1st Stage COMBUSTION PRESS WITCH OPEN | 2 |
| 49 | FREEZE SWITCH OPEN – CIRCUIT 1 | 2 |
| 50 | FREEZE SWITCH OPEN -CIRCUIT 2 | 2 |
| 55 | 2nd Stage COMBUSTION PRESS WITCH CLOSED | 2 |
| 57 | 2nd Stage COMBUSTION PRESS WITCH 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

## WIRING INFORMATION

LINE VOLTAGE
-FACTORY STANDARD
-FACTORY OPTION
-FIELD INST ALLED

LOW VOLTAGE
-FACTORY STANDARD
-FACTORY OPTION
-FIELD INST ALLED

REPLACEMENT WIRE
-MUST BE THE SAME SIZE AND TYPE OF INSULATION AS ORIG INAL (105ºC MIN.)

WARNING
-CABINET MUST BE PERMANE NTLY 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 (CC1).
4. REMOVE J3 AT (CC1) TO INSTALL LOW AMBIENT ACCESSORY.
5. IF REQUIRED, ATTACH CRANKCASE HEATER ACCESSORY TO CC1 (L1) AND CC1 (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 CONNECTIONS FOR ALTERNATE VOLTAGES, IF REQUIRED.

| UNIT VOLTAGES - HZ | TRANSFORMER TERM. |
|---|---|
| 200-220 - 50HZ | 200 |
| 208 - 60HZ | 230 |
| 230 - 60HZ | 230 |
| 380 - 60HZ | 400 |
| 380-415 - 50HZ | 400 |
| 460 - 60HZ | 460 |
| 575 - 60HZ | 575 |

8. LOW VOLTAGE CIRCUIT IS N.E.C. CLASS 2 WITH A CLASS 2 TRANSFORMER, 24VAC, 50/60 HZ SUPPLIED.
9. MOTOR FACTORY WIRED FOR CORRECT VOLTAGE.
10. REMOVE PL24 FOR ECONOMIZER ACCESSORY. PL22 AND PL24 LOCATED IN RETURN AIR SECTION.

## COMPONENT CODES

| | |
|---|---|
| BC | BLOWER CONTACTOR |
| CA | COMFORT ALERT MODULE |
| CC | COMPRESSOR CONTACTOR |
| CCH | CRANKCASE HEATER |
| CDS | CLOGGED DRAIN SENSOR |
| CFS | CLOGGED FILTER SWITCH |
| COMP | COMPRESSOR |
| CT | CONTROL TRANSFORMER |
| DAT | DISCHARGE AIR SENSOR |
| DISC | DISCONNECT SWITCH |
| FLMS | FLAME SENSOR |
| FP | FAN PROVING |
| FS | FREEZE SENSOR |
| GFCO | GROUND FAULT CONVENIENCE OUTLET |
| GL | GROUND LUG |
| GND | GROUND |
| GV | GAS VALVE |
| HPC | HIGH PRESSURE CONTROL |
| IBM | INDOOR BLOWER MOTOR |
| IDM | INDUCED DRAFT MOTOR |
| IFC | INTEGRATED FURNACE CONTROL |
| LAC | LOW AMBIENT CONTROL |
| LPC | LOW PRESSURE CONTROL |
| MAS | MIXED AIR SENSOR |
| MLC | MAIN LIMIT CONTROL |
| MRLC | MANUAL RESET LIMIT CONTROL |
| NPC | NEGATIVE PRESSURE SWITCH |
| OAT | OUTSIDE AIR SENSOR |
| OFM | OUTDOOR FAN MOTOR |
| PL | PLUG |
| PT | POWER TRANSFORMER |
| RAT | RETURN AIR SENSOR |
| RC | RUN CAPACITOR |
| RTU-C | ROOFTOP UNIT CONTROL |
| SE | SPARK ELECTRODE |
| US | UNLOADER SOLENOID |

## WIRE COLOR CODE

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

## ELECTRICAL WIRING SCHEMATIC

GE DDC 2 STG 150
208/230/380/460V, 3PH, 60HZ

GE DDC 2 STG 150
380-415V, 3PH, 50HZ

| APPROVED: | CHECKED: | ORIGINAL RELEASE NO.: |
|---|---|---|
| MODELED BY: JHB | DATE: 03-19-18 | R-1071S208 |
| PART NO.: 90-106178-15 | | REV: 00 |

**FIGURE 45**

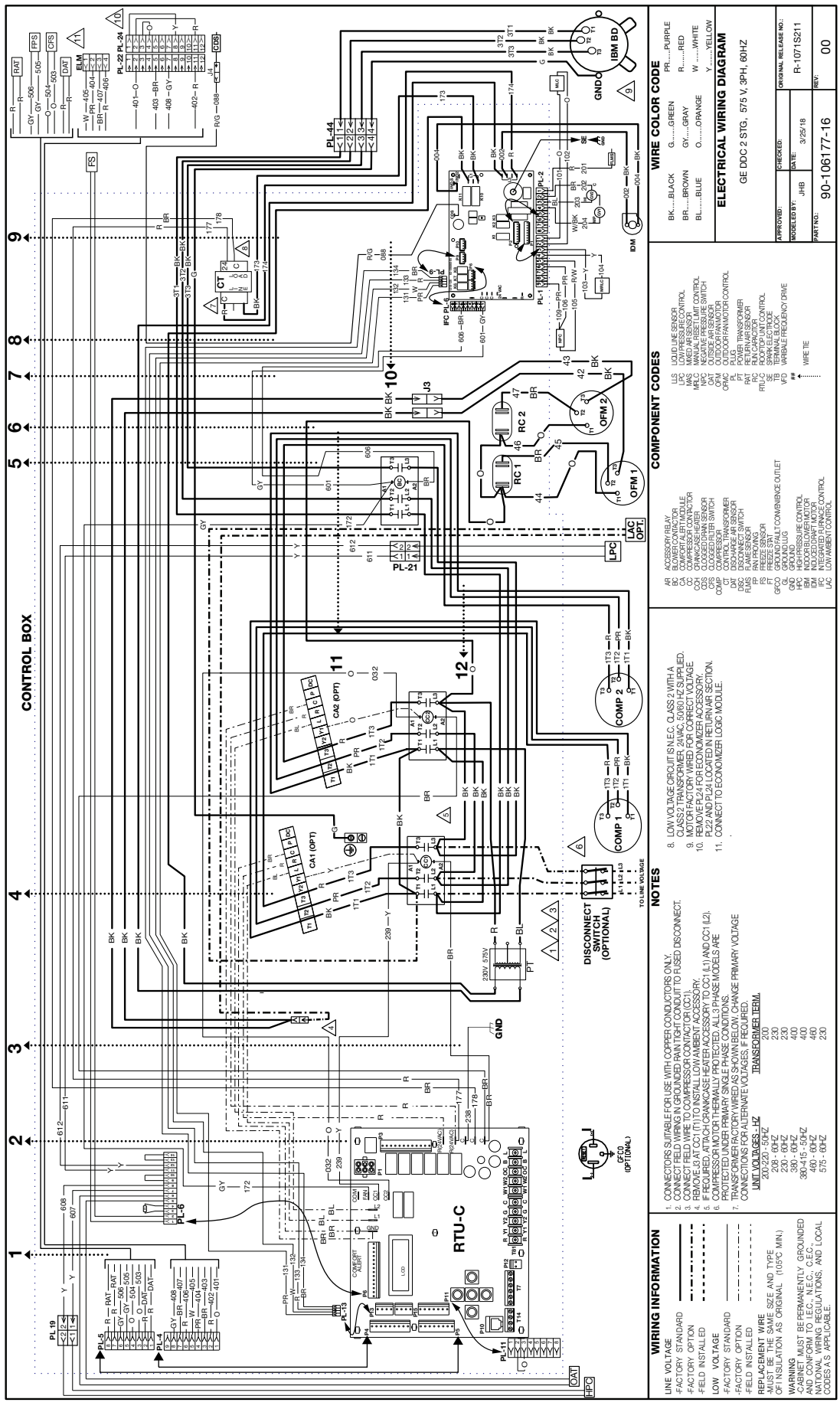

CONTROL BOX
RTU-C
IBM BD
IDM
PL-44
PL-21
PL-22 PL-24
PL-19
PL-5
PL-4
PL-6
PL-13
PL-11
COMP 1
COMP 2
OFM 1
OFM 2
RC 1
RC 2
CA1 (OPT)
CA2 (OPT)
DISCONNECT SWITCH (OPTIONAL)
TO LINE VOLTAGE
GFCI (OPTIONAL)
GND
CT
IFC PL-6
PL-1
PL-2
ELM
FS
LPC
LAC (OPT)
OAT
HPC
WIRING INFORMATION
LINE VOLTAGE
-FACTORY STANDARD
-FACTORY OPTION
-FIELD INSTALLED
LOW VOLTAGE
-FACTORY STANDARD
-FACTORY OPTION
-FIELD INSTALLED
REPLACEMENT WIRE
MUST BE THE SAME SIZE AND TYPE
OR INSULATION AS ORIGINAL (105°C MIN.)
WARNING
CABINET MUST BE PERMANENTLY GROUNDED
AND CONFORM TO I.E.C., N.E.C., C.E.C.,
NATIONAL WIRING REGULATIONS, AND LOCAL
CODES AS APPLICABLE.
NOTES
1. CONNECTORS SUITABLE FOR USE WITH COPPER CONDUCTORS ONLY.
2. CONNECT FIELD WIRING IN GROUNDED RAINTIGHT CONDUIT TO FUSED DISCONNECT.
3. CONNECT FIELD WIRE TO COMPRESSOR CONTACTOR (CC1).
4. REMOVE JUMPER AT CC1 (T1) TO INSTALL LOW AMBIENT ACCESSORY.
5. IF REQUIRED, ATTACH CRANKCASE HEATER ACCESSORY TO CC1 (L1) AND CC1 (L2).
6. COMPRESSOR MOTOR THERMALLY PROTECTED. ALL 3 PHASE MODELS ARE
PROTECTED AGAINST PHASE REVERSAL AND SINGLE PHASING CONDITIONS.
7. TRANSFORMER FACTORY WIRED AS SHOWN BELOW. CHANGE PRIMARY VOLTAGE
CONNECTIONS FOR ALTERNATE VOLTAGES, IF REQUIRED.
UNIT VOLTAGES - HZ | TRANSFORMER TERM.
200/220 - 50HZ | 200
208 - 60HZ | 230
230 - 60HZ | 230
380 - 50HZ | 400
380-415 - 50HZ | 400
460 - 60HZ | 460
575 - 60HZ | 230
8. LOW VOLTAGE CIRCUIT IS N.E.C. CLASS 2 WITH A CLASS 2 TRANSFORMER, 24 VAC, 50/60 HZ IS SUPPLIED.
9. MOTOR FACTORY WIRED FOR CORRECT VOLTAGE.
10. REMOVE PL24 FOR ECONOMIZER ACCESSORY; PL22 AND PL24 LOCATED IN RETURN AIR SECTION.
11. CONNECT TO ECONOMIZER LOGIC MODULE.
COMPONENT CODES
AR ACCESSORY RELAY
BC BLOWER CONTACTOR
BM BLOWER MOTOR
CC COMPRESSOR CONTACTOR
CCH CRANKCASE HEATER
CDS CONDENSATE DRAIN SENSOR
CFS CLOGGED FILTER SWITCH
COMP COMPRESSOR
CTX CONTROL TRANSFORMER
DAT DISCHARGE AIR SENSOR
DISC DISCONNECT SWITCH
FMS FAN MONITOR
FPS FREEZE SENSOR
GFCI GROUND FAULT CONVENIENCE OUTLET
GL GROUND LUG
HPC HIGH PRESSURE CONTROL
IBM INDOOR BLOWER MOTOR
IDM INDUCED DRAFT MOTOR
IFC INTEGRATED FURNACE CONTROL
LAC LOW AMBIENT CONTROL
LLS LIQUID LINE SENSOR
LPC LOW PRESSURE CONTROL
MAS MIXED AIR SENSOR
MRLC MANUAL RESET LIMIT CONTROL
MRPC MANUAL RESET PRESSURE SWITCH
OAT OUTSIDE AIR SENSOR
OFM OUTDOOR FAN MOTOR
OFMC OUTDOOR FAN MOTOR CONTROL
PL PLUG
PT POWER TRANSFORMER
RAT RETURN AIR SENSOR
RC RUN CAPACITOR
RTU-C ROOFTOP UNIT CONTROL
TB TERMINAL BLOCK
TS TERMINAL STRIP
VFD VARIBALE FREQUENCY DRIVE
## WIRE TIE
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 2 STG, 575 V, 3PH, 60HZ
APPROVED: | CHECKED: | ORIGINAL RELEASE NO.:
MODELED BY: JHB | DATE: 3/25/18 | R-1071S211
PART NO. 90-106177-16 | REV. 00

**FIGURE 46**

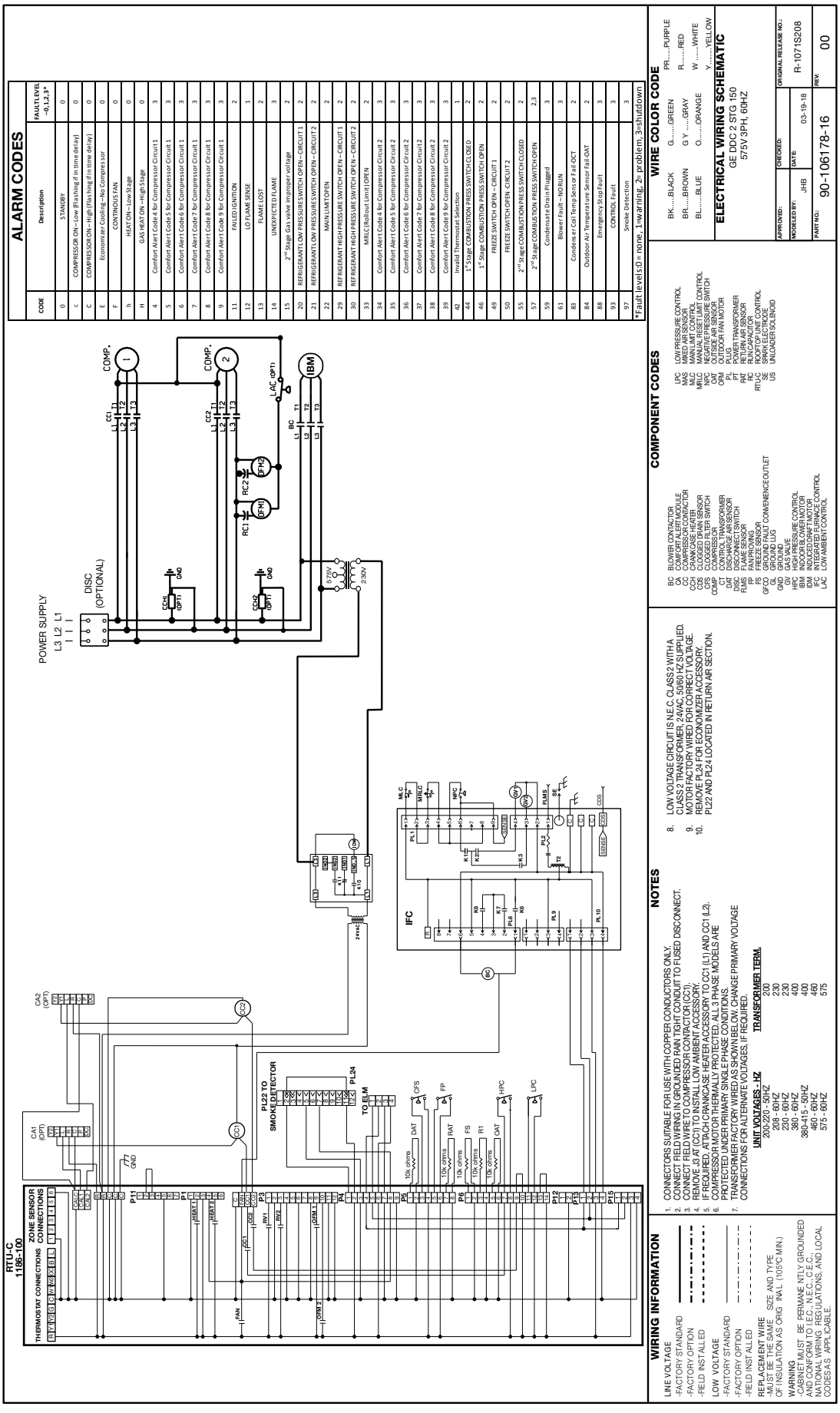

ALARM CODES
CODE
Description
FAULT LEVEL -0,1,2,3*
0 STANDBY 0
C COMPRESSOR ON – Low (Pre-timing if in time delay) 0
C COMPRESSOR ON – High (Pre-timing if in time delay) 0
E Economizer Cooling – No Compressor 0
F CONTINOUS FAN 0
h HEAT ON – Low Stage 0
H GAS HEAT ON – High Stage 0
4 Comfort Alert Code 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 2nd 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 1st Stage COMBUSTION PRESS SWITCH CLOSED 2
46 1st Stage COMBUSTION PRESS SWITCH OPEN 2
49 FREEZE SWITCH OPEN – CIRCUIT 1 2
50 FREEZE SWITCH OPEN – CIRCUIT 2 2
55 2nd Stage COMBUSTION PRESS SWITCH CLOSED 2
57 2nd 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
COMPONENT CODES
BC BLOWER CONTACTOR
CB CIRCUIT BREAKER/FUSE
CC COMPRESSOR CONTACTOR
CCH CRANKCASE HEATER
CFS CLOGGED FILTER SENSOR
CFS CLOGGED FILTER SWITCH
COMP COMPRESSOR
DAT DISCHARGE AIR SENSOR
DISC DISCONNECT SWITCH
FLMS FLAME SENSOR
FP FREEZE SENSOR
GFCI GROUND FAULT CONVENIENCE OUTLET
HPC HIGH PRESSURE CONTROL
GND GROUND
GV GAS VALVE
IFC INTEGRATED FURNACE CONTROL
IBM INDOOR BLOWER MOTOR
IDM INDUCED DRAFT MOTOR
IFC INTEGRATED FURNACE CONTROL
LAC LOW AMBIENT CONTROL
LPC LOW PRESSURE CONTROL
MAS MIXED AIR SENSOR
MLC MAIN LIMIT CONTROL
MRLC MANUAL RESET LIMIT CONTROL
NPC NEGATIVE PRESSURE SWITCH
OAT OUTSIDE AIR SENSOR
ODM OUTDOOR FAN MOTOR
PL PLUG
PT POWER TRANSFORMER
RAT RETURN AIR SENSOR
RC RUN CAPACITOR
RTU-C ROOFTOP UNIT CONTROL
SE SPARK ELECTRODE
US UNLOADER SOLENOID
WIRE COLOR CODE
BK.....BLACK G.....GREEN PR.....PURPLE
BR.....BROWN G Y .....GRAY R.....RED
BL.....BLUE O.....ORANGE W .....WHITE
Y .....YELLOW
ELECTRICAL WIRING SCHEMATIC
GE DDC 2 STG 150
575V 3PH, 60HZ
APPROVED: CHECKED: ORIGINAL RELEASE NO.:
MODELED BY: JHB DATE: 03-19-18 R-1071S208
PART NO. 90-106178-16 REV: 00
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 (CC1).
4. REMOVE JUMPER AT (CC1) TO INSTALL LOW AMBIENT ACCESSORY.
5. IF REQUIRED, ATTACH CRANKCASE HEATER ACCESSORY TO CC1 (L1) AND CC1 (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 CONNECTIONS FOR ALTERNATE VOLTAGES, IF REQUIRED.
UNIT VOLTAGES - HZ TRANSFORMER TERM.
200/220 - 50HZ 200
208 - 60HZ 230
220 - 60HZ 230
380 - 60HZ 400
380-415 - 50HZ 400
460 - 60HZ 460
575 - 60HZ 575
8. LOW VOLTAGE CIRCUIT IS N.E.C. CLASS 2 WITH A CLASS 2 TRANSFORMER. 24VAC, 50/60 HZ SUPPLIED.
9. MOTORS FACTORY WIRED FOR CORRECT VOLTAGE.
10. REMOVE PL24 CONNECTOR FOR ACCESSORY. PL22 AND PL24 LOCATED IN RETURN AIR SECTION.
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 ORIG INAL (105°C MIN.)
WARNING
-CABINET MUST BE PERMANENTLY GROUNDED AND CONFORM TO I.E.C., N.E.C., C.E.C., NATIONAL WIRING REGULATIONS, AND LOCAL CODES AS APPLICABLE.
RTU-C
1186-100
THERMOSTAT CONNECTIONS
ZONE SENSOR CONNECTIONS
POWER SUPPLY
L3 L2 L1
DISC (OPTIONAL)
COMP. 1
COMP. 2
IBM
IFC
PL22 TO SMOKE DETECTOR
PL24 TO ELM
CFS
FP
HPC
LPC
DAT
RAT
OAT
FS
R1
10k ohms
GND
FAM
CC1
CC2
CCH1 (OPT)
CCH2 (OPT)
LAC (OPT)
575V
230V
24VAC

**FIGURE 47**

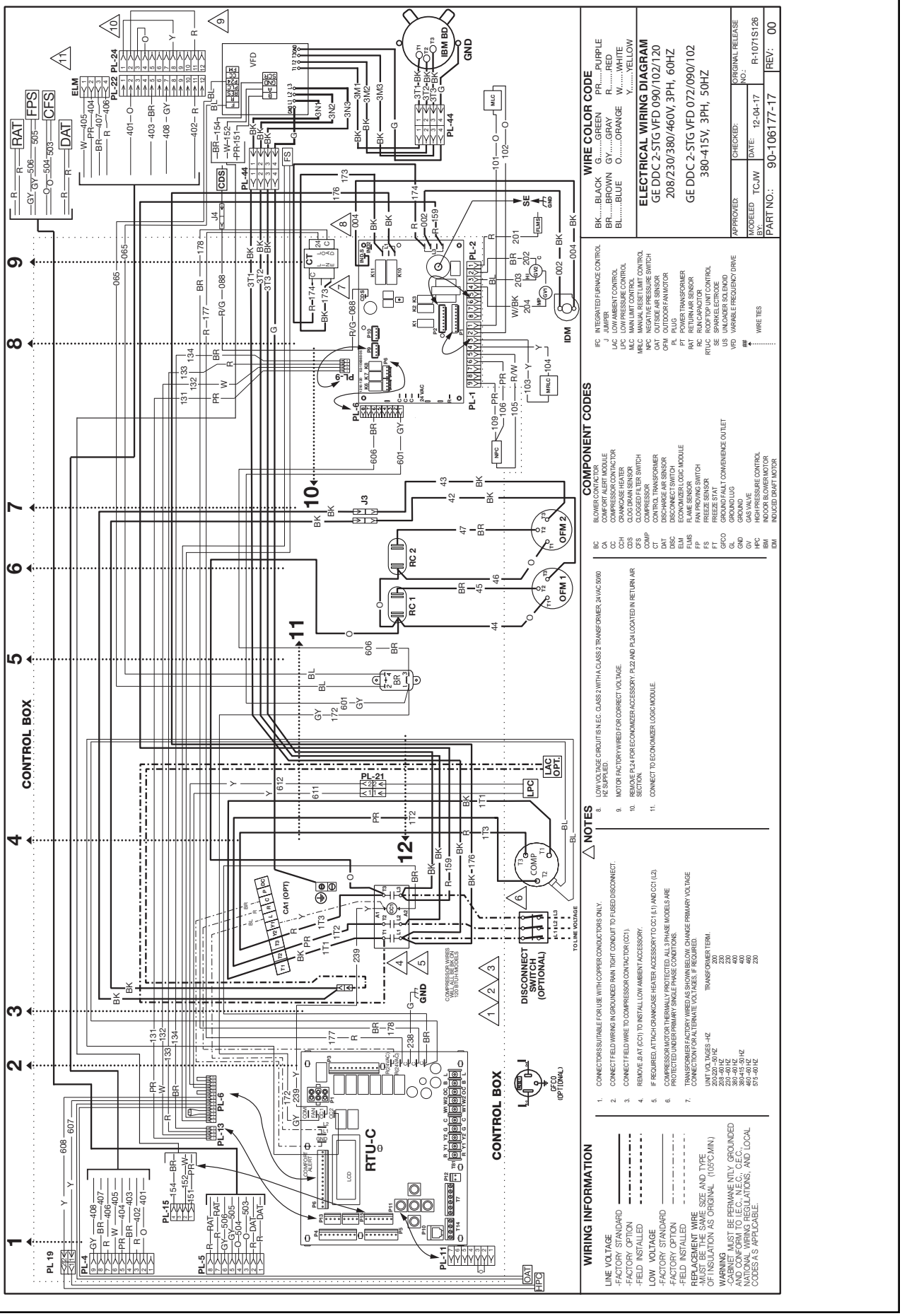
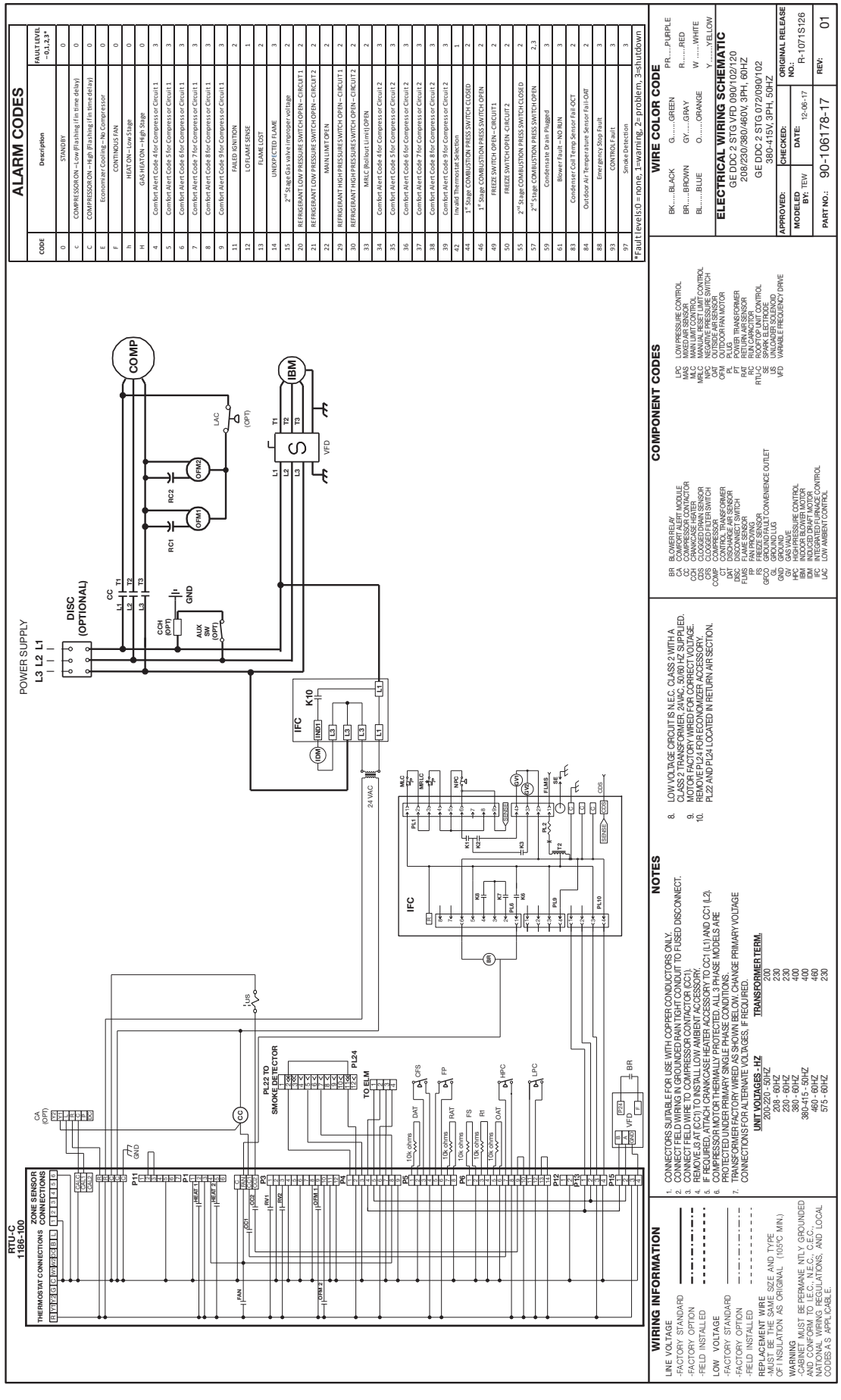

ELECTRICAL WIRING DIAGRAM
GE DDC 2-STG VFD 090/102/120
208/230/380/460V, 3PH, 60HZ
GE DDC 2-STG VFD 072/090/102
380-415V, 3PH, 50HZ
PART NO.: 90-106177-17
REV: 00
WIRE COLOR CODE
BK.....BLACK G.....GREEN PR.....PURPLE
BR.....BROWN GY.....GRAY R.....RED
BL.....BLUE O.....ORANGE W.....WHITE
Y.....YELLOW
COMPONENT CODES
NOTES
WIRING INFORMATION
CONTROL BOX
RTU-C
DISCONNECT SWITCH (OPTIONAL)
IDM
IBM
OFM 1
OFM 2
RC 1
RC 2
COMP
GFCI (OPTIONAL)

**FIGURE 48**


ALARM CODES
CODE
Description
FAULT LEVEL -0,1,2,3*
0 STANDBY 0
c COMPRESSOR –Low (Flashing (1m time delay) 0
C COMPRESSOR – High (Flashing (1m time delay) 0
E Economizer Cooling – No Compressor 0
F CONTINOUS FAN 0
h HEAT ON – Low Stage 0
H GAS HEATON – High Stage 0
4 Comfort Alert Code 4 for Compress or Circuit 1 3
5 Comfort Alert Code 5 for Compress or Circuit 1 3
6 Comfort Alert Code 6 for Compress or Circuit 1 3
7 Comfort Alert Code 7 for Compress or Circuit 1 3
8 Comfort Alert Code 8 for Compress or Circuit 1 3
9 Comfort Alert Code 9 for Compress or Circuit 1 3
11 FAILED IGNITION 2
12 LO FLAME SENSE 1
13 FLAME LOST 2
14 UNEXPECTED FLAME 3
15 2nd 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 Compress or Circuit 2 3
35 Comfort Alert Code 5 for Compress or Circuit 2 3
36 Comfort Alert Code 6 for Compress or Circuit 2 3
37 Comfort Alert Code 7 for Compress or Circuit 2 3
38 Comfort Alert Code 8 for Compress or Circuit 2 3
39 Comfort Alert Code 9 for Compress or Circuit 2 3
42 Invalid Thermostat Selection 1
44 1st Stage COMBUSTION PRESS SWITCH CLOSED 2
46 1st Stage COMBUSTION PRESS SWITCH OPEN 2
49 FREEZE SWITCH OPEN - CIRCUIT 1 2
50 FREEZE SWITCH OPEN - CIRCUIT 2 2
55 2nd Stage COMBUSTION PRESS SWITCH CLOSED 2
57 2nd 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
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 VFD 090/102/120
208/230/380/460V, 3PH, 60HZ
GE DDC 2 STG 072/090/102
380-415V, 3PH, 50HZ
APPROVED:
CHECKED:
ORIGINAL RELEASE NO.:
MODELED BY: TEW
DATE: 12-06-17
R-1071S126
PART NO.: 90-106178-17
REV: 01
COMPONENT CODES
BR BLOWER RELAY
CA COMFORT ALERT MODULE
CC COMPRESSOR CONTACTOR
COH CRANKCASE HEATER
CDS CLOGGED DRAIN SENSOR
CFS CLOGGED FILTER SWITCH
COMP COMPRESSOR
CT CONTROL TRANSFORMER
DAT DISCHARGE AIR SENSOR
DISC DISCONNECT SWITCH
FLMS FLAME SENSOR
FP FAN PROVING
FS FREEZE SENSOR
GFCO GROUND FAULT CONVENIENCE OUTLET
GL GROUND LUG
GND GROUND
OV OVERVOLTAGE
HPC HIGH PRESSURE CONTROL
IBM INDOOR BLOWER MOTOR
IFC INTEGRATED FURNACE CONTROL
IFC INTEGRATED FURNACE CONTROL
LAC LOW AMBIENT CONTROL
LPC LOW PRESSURE CONTROL
MAS MIXED AIR SENSOR
MAT MANUAL AIR CONTROL
MRLC MANUAL RESET LIMIT CONTROL
NPC NEGATIVE PRESSURE SWITCH
OAT OUTDOOR AIR SENSOR
OFM OUTDOOR FAN MOTOR
PL PLUG
PT POWER TRANSFORMER
RAT RETURN AIR SENSOR
RC RUN CAPACITOR
RTU-C RTU-C CONTROL
SE SPARK ELECTRODE
US UNLOADER SOLENOID
VFD VARIABLE FREQUENCY DRIVE
NOTES
1. LOW VOLTAGE CIRCUIT IS N.E.C. CLASS 2 WITH A CLASS 2 TRANSFORMER, 24 VAC, 50/60 HZ, SUPPLIED.
2. CONNECTORS SUITABLE FOR USE WITH COPPER CONDUCTORS ONLY.
3. CONNECT FIELD WIRING IN GROUNDED RAIN TIGHT CONDUIT TO FUSED DISCONNECT.
4. CONNECT FIELD WIRE TO COMPRESSOR CONTACTOR (CC1).
5. REMOVE JUMPER J8 AT (CC1) TO INSTALL LOW AMBIENT ACCESSORY.
6. IF REQUIRED, ATTACH CRANKCASE HEATER ACCESSORY TO CC1 (L1) AND CC1 (L2).
7. COMPRESSOR MOTOR THERMALLY PROTECTED. ALL 3 PHASE MODELS ARE PROTECTED UNDER PRIMARY SINGLE PHASE CONDITIONS.
8. TRANSFORMER FACTORY WIRED AS SHOWN BELOW. CHANGE PRIMARY VOLTAGE CONNECTIONS FOR ALTERNATE VOLTAGES, IF REQUIRED.
UNIT VOLTAGES - HZ TRANSFORMER TERM.
200-220 - 50HZ 200
208 - 60HZ 230
230 - 60HZ 230
380 - 60HZ 400
380-415 - 50HZ 400
460 - 60HZ 460
575 - 60HZ 230
9. LOW VOLTAGE CIRCUIT IS N.E.C. CLASS 2 WITH A CLASS 2 TRANSFORMER, 24 VAC, 50/60 HZ, SUPPLIED.
10. MOTOR FACTORY WIRED FOR CORRECT VOLTAGE. REMOVE PL24 FOR ECONOMIZER ACCESSORY. PL22 AND PL24 LOCATED IN RETURN AIR SECTION.
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 OR INSULATION AS ORIGINAL (105°C MIN.)
WARNING
-CABINET MUST BE PERMANENTLY GROUNDED AND CONFORM TO N.E.C. AND LOCAL NATIONAL WIRING REGULATIONS, AND LOCAL CODES AS APPLICABLE.
RTU-C
1188-100
THERMOSTAT CONNECTIONS
ZONE SENSOR CONNECTIONS
POWER SUPPLY
L3 L2 L1
DISC (OPTIONAL)
CC
CCH (OPT)
AUX 24V (OPT)
GND
COMP
OFM2
OFM1
RC2
RC1
LAC (OPT)
IBM
VFD
IFC
K10
24 VAC
PL22 TO SMOKE DETECTOR
PL24
TO ELM
CA (OPT)
FAN
HEAT 1
HEAT 2
OFM 1
OFM 2
10k ohms
DAT
FS
RT
OAT
CFS
FP
HPC
LPC
BR
CCH
CCB
SENSE
MLC
MRLC
NPC
FLMS
SE
PL1
PL2
PL3
PL4
PL5
PL6
PL7
PL8
PL9
PL10
K1
K2
K3
K6
K7
K8
IFM
IDM
T1
T2
T3
L1
L2
L3
J1
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
P11
P15
P16
P17
P18
P20
P21
P22
P23
P24
P25
P26
P27
P28
P29
P30
P31
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P77
P78
P79
P80
P81
P82
P83
P84
P85
P86
P87
P88
P89
P90
P91
P92
P93
P94
P95
P96
P97
P98
P99
P100

**FIGURE 49**

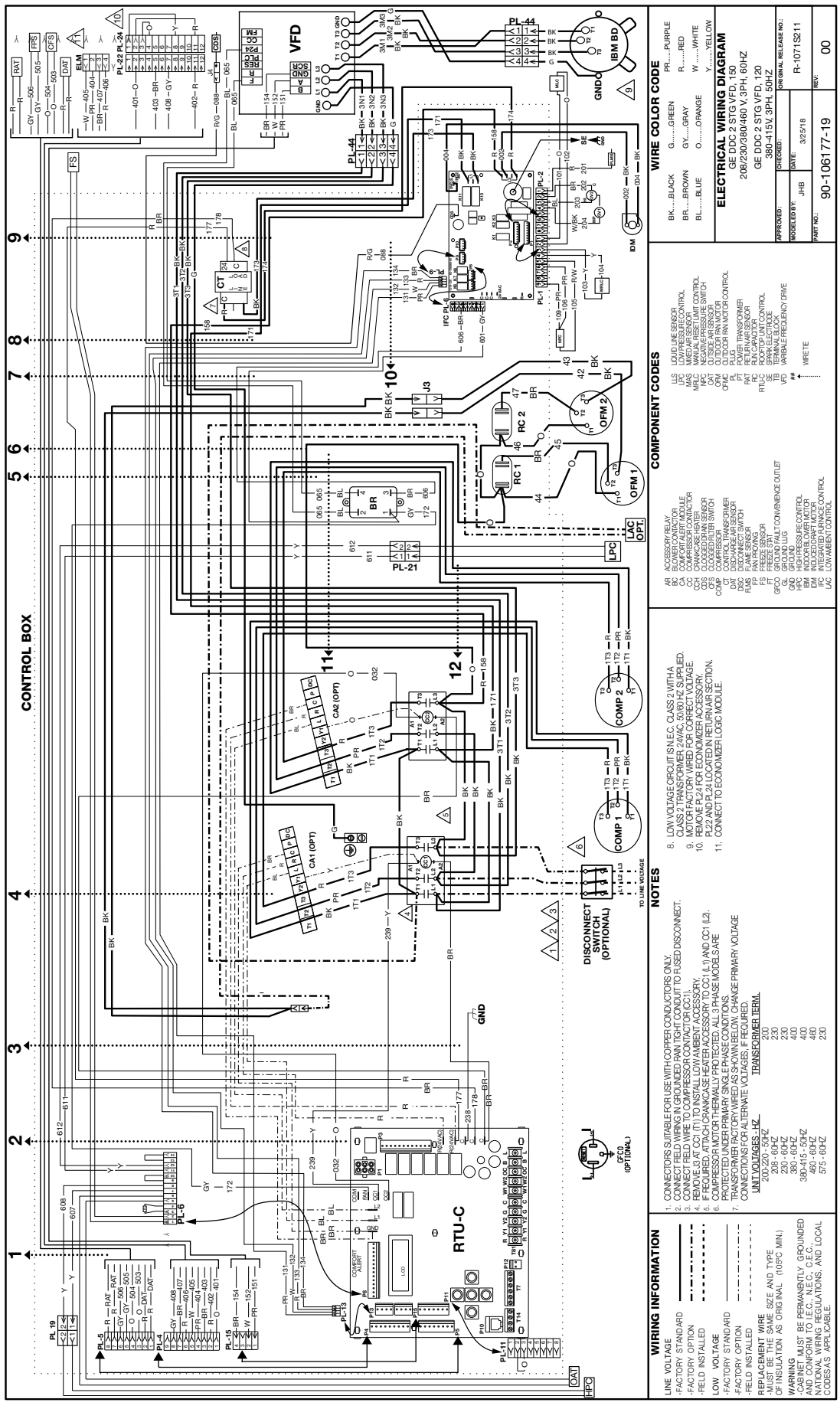
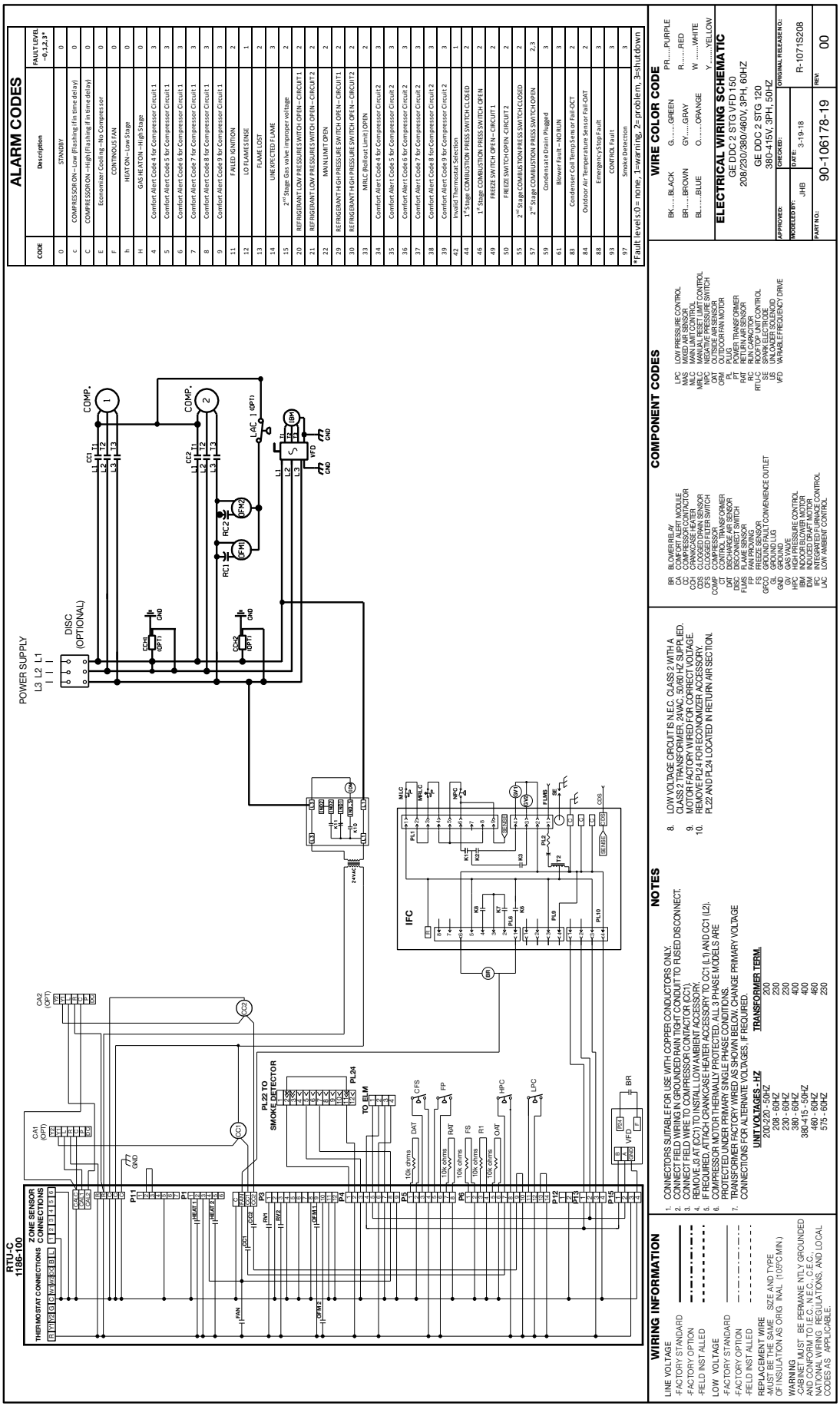

CONTROL BOX
RTU-C
VFD
IBM BD
IDM
PL-44
PL-22 PL-24
PL-6
PL-5
PL-4
PL-15
PL-19
PL-11
PL-13
PL-21
PL-1
PL-2
RC 1
RC 2
OFM 1
OFM 2
COMP 1
COMP 2
CA1 (OPT)
CA2 (OPT)
CT
IFC PL
DISCONNECT SWITCH (OPTIONAL)
TO LINE VOLTAGE
GFCO (OPTIONAL)
WIRING INFORMATION
LINE VOLTAGE
-FACTORY STANDARD
-FACTORY OPTION
-FIELD INSTALLED
LOW VOLTAGE
-FACTORY STANDARD
-FACTORY OPTION
-FIELD INSTALLED
REPLACEMENT WIRE
MUST BE THE SAME SIZE AND TYPE
OR INSULATION AS ORIGINAL (105°C MIN.)
WARNING
CABINET MUST BE PERMANENTLY GROUNDED
AND CONFORM TO I.E.C., N.E.C., C.E.C.,
NATIONAL WIRING REGULATIONS, AND LOCAL
CODES AS APPLICABLE.
NOTES
1. CONNECTORS SUITABLE FOR USE WITH COPPER CONDUCTORS ONLY.
2. CONNECT FIELD WIRING IN GROUNDED PAN TIGHT CONDUIT TO FUSED DISCONNECT.
3. CONNECT FIELD WIRE TO COMPRESSOR CONTACTOR (CC1).
4. REMOVE JUMPER BETWEEN TERMINALS T1 AND T2 OF CC1 (T1) TO INSTALL LOW AMBIENT ACCESSORY.
5. IF REQUIRED, ATTACH CRANKCASE HEATER ACCESSORY TO CC1 (L1 AND CC1 (L2).
6. COMPRESSOR MOTOR PTC PROTECTED. ALL 3PH, 460V MODELS ARE PROTECTED WITH OPTIONAL SINGLE PHASE PROTECTORS.
7. TRANSFORMER FACTORY WIRED AS SHOWN BELOW. CHANGE PRIMARY VOLTAGE CONNECTIONS FOR ALTERNATE VOLTAGES, IF REQUIRED.
UNIT VOLTAGES - HZ TRANSFORMER TERM.
200-220 - 50HZ 200
208 - 60HZ 230
230 - 60HZ 230
380 - 60HZ 400
380-415 - 50HZ 400
460 - 60HZ 460
575 - 60HZ 230
8. LOW VOLTAGE CIRCUIT IS N.E.C. CLASS 2 WITH A CLASS 2 TRANSFORMER. 24VAC, 50/60 HZ SUPPLIED.
9. MOTOR FACTORY WIRED FOR CORRECT VOLTAGE.
10. REMOVE PL24 FOR ECONOMIZER ACCESSORY. PL22 AND PL24 LOCATED IN RETURN AIR SECTION.
11. CONNECT TO ECONOMIZER LOGIC MODULE.
COMPONENT CODES
AR ACCESSORY RELAY
BC BLOWER CONTACTOR
BM BLOWER MOTOR
CC COMPRESSOR CONTACTOR
CCH CRANKCASE HEATER
CPS COMPRESSOR PROTECTOR
CTS CLOGGED FILTER SWITCH
COMP COMPRESSOR
CT CONTROL TRANSFORMER
DAT DISCHARGE AIR SENSOR
DSC DISCONNECT SWITCH
FLS FLAME SENSOR
FP1 FAN PROVING
FS FREEZE SENSOR
FU FUSE BLOCK
GFCO GROUND FAULT CONVENIENCE OUTLET
GL GROUND LUG
HPC HIGH PRESSURE CONTROL
IBM INDOOR BLOWER MOTOR
IDM INDUCED DRAFT MOTOR
LAC LOW AMBIENT CONTROL
LLS LIQUID LINE SENSOR
LPC LOW PRESSURE CONTROL
MAS MIXED AIR SENSOR
MRLC MANUAL RESET LIMIT CONTROL
NPC NEGATIVE PRESSURE SWITCH
OAT OUTSIDE AIR SENSOR
ORM OUTDOOR FAN MOTOR
OTM OUTDOOR FAN MOTOR CONTROL
PL PLUG
PT POWER TRANSFORMER
RAT RETURN AIR SENSOR
RC RUN CAPACITOR
RTU-C ROOFTOP UNIT CONTROL
SE SPACE SENSOR
TB TERMINAL BLOCK
VFD VARIBALE FREQUENCY DRIVE
## WIRE
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 2 STG VFD, 150
208/230/380/460 V, 3PH, 60HZ
GE DDC 2 STG VFD, 120
380-415V, 3PH, 50HZ
APPROVED:
CHECKED:
ORIGINAL RELEASE NO.:
MODELED BY: JHB
DATE: 3/25/18
R-1071S211
PART NO.: 90-106177-19
REV: 00

**FIGURE 50**


ALARM CODES
CODE
Description
FAULT LEVEL -0,1,2,3*
0 STANDBY 0
C COMPRESSOR – Low (Flashing f in time delay) 0
C COMPRESSOR – High (Flashing f in time delay) 0
E Economizer Cooling – No Compressor 0
F CONTINOUS FAN 0
h HEAT ON – Low Stage 0
H GAS HEATON – 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 2nd Stage Gas valve improper voltage 2
20 REFRIGERANT LOW PRESSURES SWITCH OPEN – CIRCUIT 1 2
21 REFRIGERANT LOW PRESSURES SWITCH OPEN – CIRCUIT 2 2
22 MAIN LIMIT OPEN 2
29 REFRIGERANT HIGH PRESSURE SWITCH OPEN – CIRCUIT1 2
30 REFRIGERANT HIGH PRESSURE SWITCH OPEN – CIRCUIT2 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 1st Stage COMBUSTION PRESS SWITCH CLOSED 2
46 1st Stage COMBUSTION PRESS SWITCH OPEN 2
49 FREEZE SWITCH OPEN – CIRCUIT 1 2
50 FREEZE SWITCH OPEN: CIRCUIT 2 2
55 2nd Stage COMBUSTION PRESS SWITCH CLOSED 2
57 2nd 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 CONFIG. Fault 3
97 Smoke Detection 3
*Fault levels 0 = none, 1=warning, 2= problem, 3=shutdown
COMPONENT CODES
BR BLOWER RELAY
CA CONNECT-A-PORT MODULE
CC COMPRESSOR CONTACTOR
CCH CRANKCASE HEATER
CFM CONDENSER FAN MOTOR
CFS CLOGGED FILTER SWITCH
COMP COMPRESSOR
CT CONTRACTOR TRANSFORMER
DAT DISCHARGE AIR SENSOR
DISC DISCONNECT SWITCH
FLMS FLAME SENSOR
FP FAN PROVING
FS FREEZE SENSOR
GFCO GROUND FAULT CONVENIENCE OUTLET
GR GRAIN PLUG
GND GROUND
GV GAS VALVE
HPC HIGH PRESSURE CONTROL
IBM INDOOR BLOWER MOTOR
IDM INDUCED DRAFT MOTOR
IFC INTEGRATED FURNACE CONTROL
LAC LOW AMBIENT CONTROL
LPC LOW PRESSURE CONTROL
MAS MIXED AIR SENSOR
MLC MAIN LIMIT CONTROL
MRLC MANUAL RESET LIMIT CONTROL
NPC NEGATIVE PRESSURE SWITCH
OAT OUTSIDE AIR SENSOR
OFM OUTDOOR FAN MOTOR
PL PLUG
PT POWER TRANSFORMER
RAT RETURN AIR SENSOR
RC RUN CAPACITOR
RTU-C ROOFTOP UNIT CONTROL
SE SPARK ELECTRODE
SV SOLENOID VALVE
VFD VARIABLE FREQUENCY DRIVE
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 VFD 150
208/230/380/460V, 3PH, 60HZ
GE DDC 2 STG 120
380-415V, 3PH, 50HZ
APPROVED:
CHECKED:
ORIGINAL RELEASE NO:
MODELED BY: JHB
DATE: 3-19-18
R-1071S208
PART NO: 90-106178-19
REV: 00
NOTES
1. CONNECTORS SUITABLE FOR USE WITH COPPER CONDUCTORS ONLY.
2. CONNECT FIELD WIRING IN GROUNDED RAIN TIGHT CONDUIT TO RUSED DISCONNECT.
3. CONNECT FIELD WIRE TO COMPRESSOR CONTACTOR (CC1).
4. REMOVE J8 AT (CC1) TO INSTALL LOW AMBIENT ACCESSORY.
5. IF REQUIRED, ATTACH CRANKCASE HEATER ACCESSORY TO CC1 (L1) AND CC1 (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 CONNECTIONS FOR ALTERNATE VOLTAGES, IF REQUIRED.
UNIT VOLTAGES - HZ TRANSFORMER TERM.
200/220 - 50HZ 200
208 - 60HZ 230
220 - 50HZ 230
230 - 60HZ 230
380-415 - 50HZ 400
460 - 60HZ 460
575 - 60HZ 230
8. LOW VOLTAGE CIRCUIT IS N.E.C. CLASS 2 WITH A CLASS 2 TRANSFORMER, 24VAC, 50/60 HZ SUPPLIED.
9. MOTORS FACTORY WIRED FOR CORRECT VOLTAGE.
10. REMOTE PL24 LOCATED IN SUPPLY AIR SECTION. PL22 AND PL24 LOCATED IN RETURN AIR SECTION.
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 ORIG INAL (105°C MIN.)
WARNING
-CABINET MUST BE PERMANENTLY GROUNDED AND CONFORM TO I.E.C., N.E.C., C.E.C., NATIONAL WIRING REGULATIONS, AND LOCAL CODES AS APPLICABLE.
RTU-C
1186-100
THERMOSTAT CONNECTIONS
ZONE SENSOR CONNECTIONS
POWER SUPPLY
L3 L2 L1
DISC (OPTIONAL)
COMP. 1
COMP. 2
CC1
CC2
CCH1 (OPT)
CCH2 (OPT)
RC1
RC2
OFM1
OFM2
LAC 1 (OPT)
VFD
GND
CA1 (OPT)
CA2 (OPT)
PL11
PL12
PL13
PL14
PL15
PL16
PL22 TO SMOKE DETECTOR
PL24
TO ELM
IFC
PL1
PL2
PL3
PL5
PL6
PL9
PL10
MLC
NPC
FLMS
DAT
CFS
FP
FS
HPC
LPC
OAT
R1
10k ohms
24VAC
BR
CCH
CCH1
CCH2
CC1
CC2
OFM1
OFM2
VFD
GND
FAN
HEAT 1
HEAT 2
OFM 1
OFM 2
CCH1
CCH2
RV1
RV2
OAT
R1
DAT
RAT
FP
FS
HPC
LPC
MLC
NPC
FLMS
CFS
BR

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

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