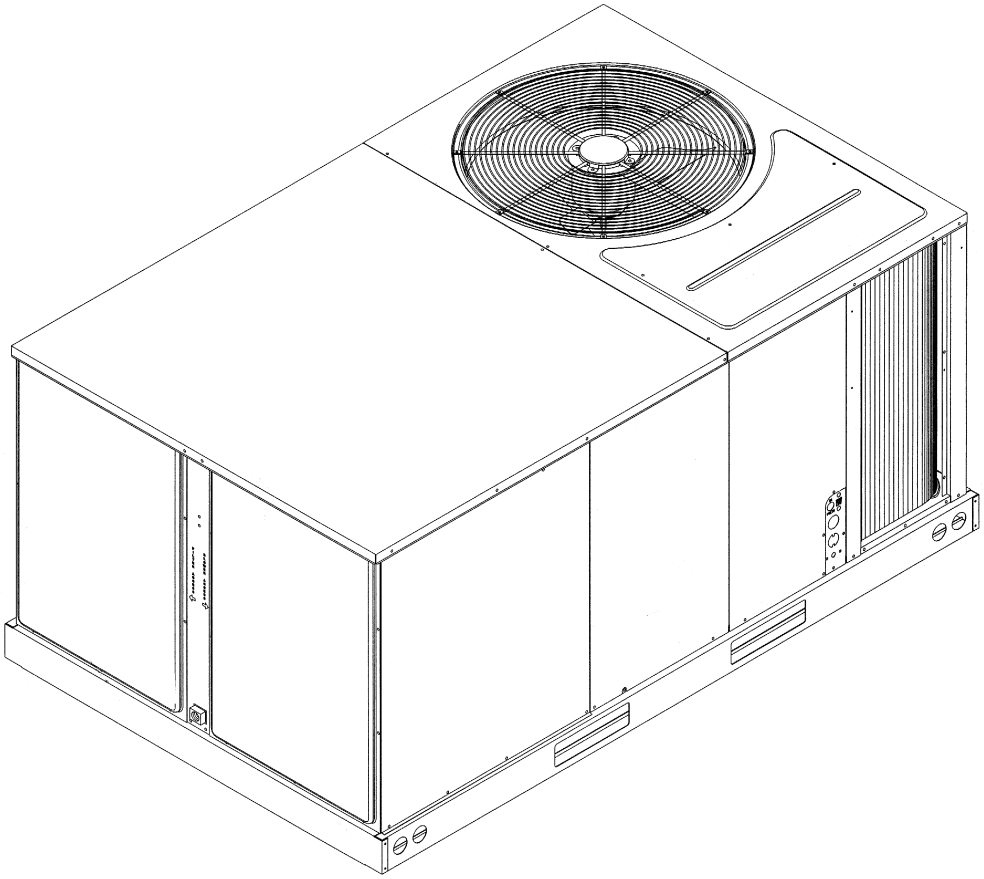
INSTALLATION INSTRUCTIONS

PACKAGE HEAT PUMPS

RJKA/RJMA 3-5 TON SERIES



RECOGNIZE THIS SYMBOL AS AN INDICATION OF IMPORTANT SAFETY INFORMATION!

⚠ WARNING

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

c UL us LISTED

ISO 9001:2000

DO NOT DESTROY THIS MANUAL

PLEASE READ CAREFULLY AND KEEP IN A SAFE PLACE FOR FUTURE REFERENCE BY A SERVICEMAN

92-23577-09-09
SUPERCEDES 92-23577-09-08

I. TABLE OF CONTENTS

➤ Installation Instructions are updated on a regular basis. This is done as product changes occur or if new information becomes available. In this publication, an arrow (➤) denotes changes from the previous edition or additional new material.

II. INTRODUCTION

⚠ Recognize this symbol as an indication of Important Safety Information!

⚠ WARNING

PROPOSITION 65: THIS APPLIANCE CONTAINS FIBERGLASS INSULATION. RESPIRABLE PARTICLES OF FIBERGLASS ARE KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER.

⚠ WARNING

THE MANUFACTURER'S WARRANTY DOES NOT COVER ANY DAMAGE OR DEFECT TO THE HEAT PUMP 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 HEAT PUMP. YOU SHOULD BE AWARE THAT THE USE OF UNAUTHORIZED COMPONENTS, ACCESSORIES OR DEVICES MAY ADVERSELY AFFECT THE OPERATION OF THE HEAT PUMP 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 package heat pump. There are a few precautions that should be taken to derive maximum satisfaction from it. Improper installation can result in unsatisfactory operation or dangerous conditions.

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

III. CHECKING PRODUCT RECEIVED

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

IV. EQUIPMENT PROTECTION FROM THE ENVIRONMENT

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

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

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

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

⚠ WARNING

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

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

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

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

FIGURE 1
UNIT DIMENSIONS

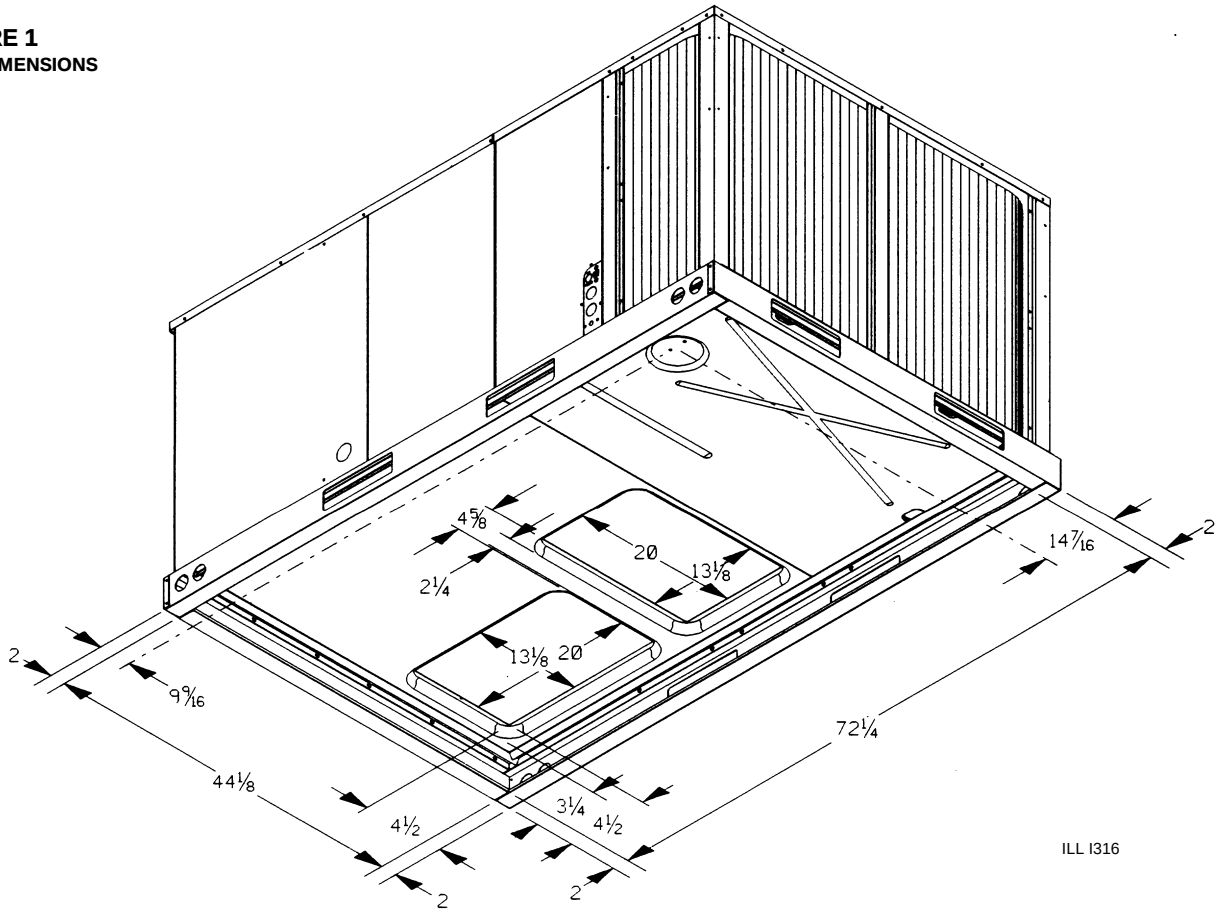


FIGURE 2
UNIT DIMENSIONS

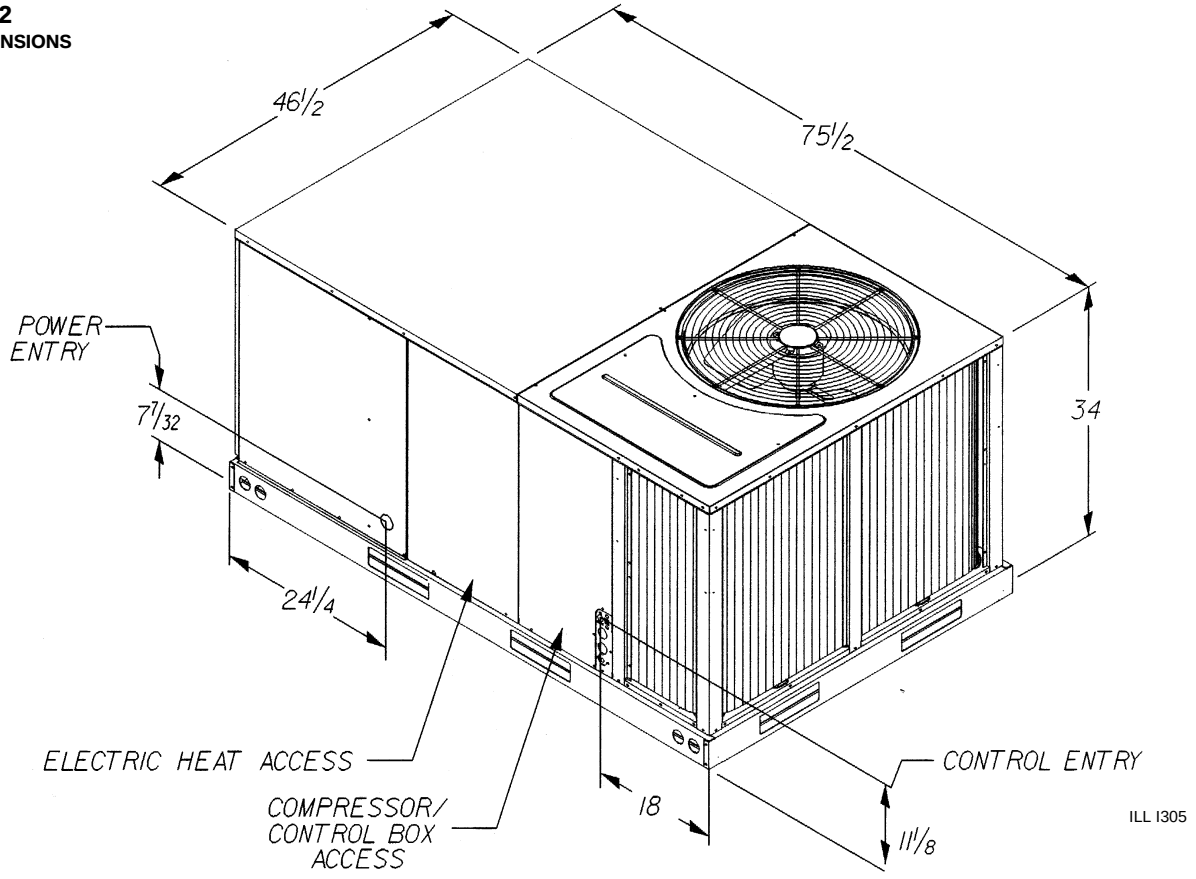


FIGURE 3
UNIT DIMENSIONS

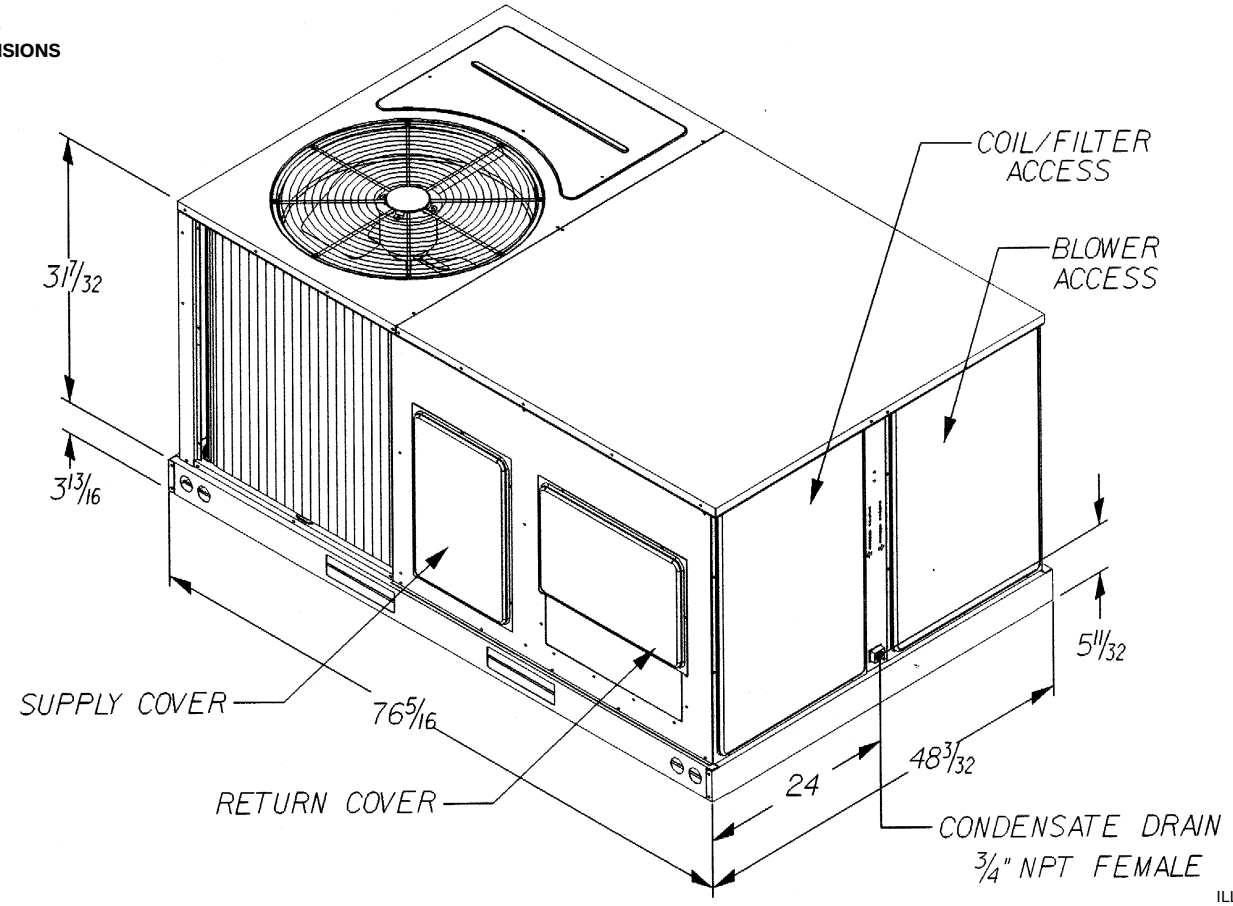
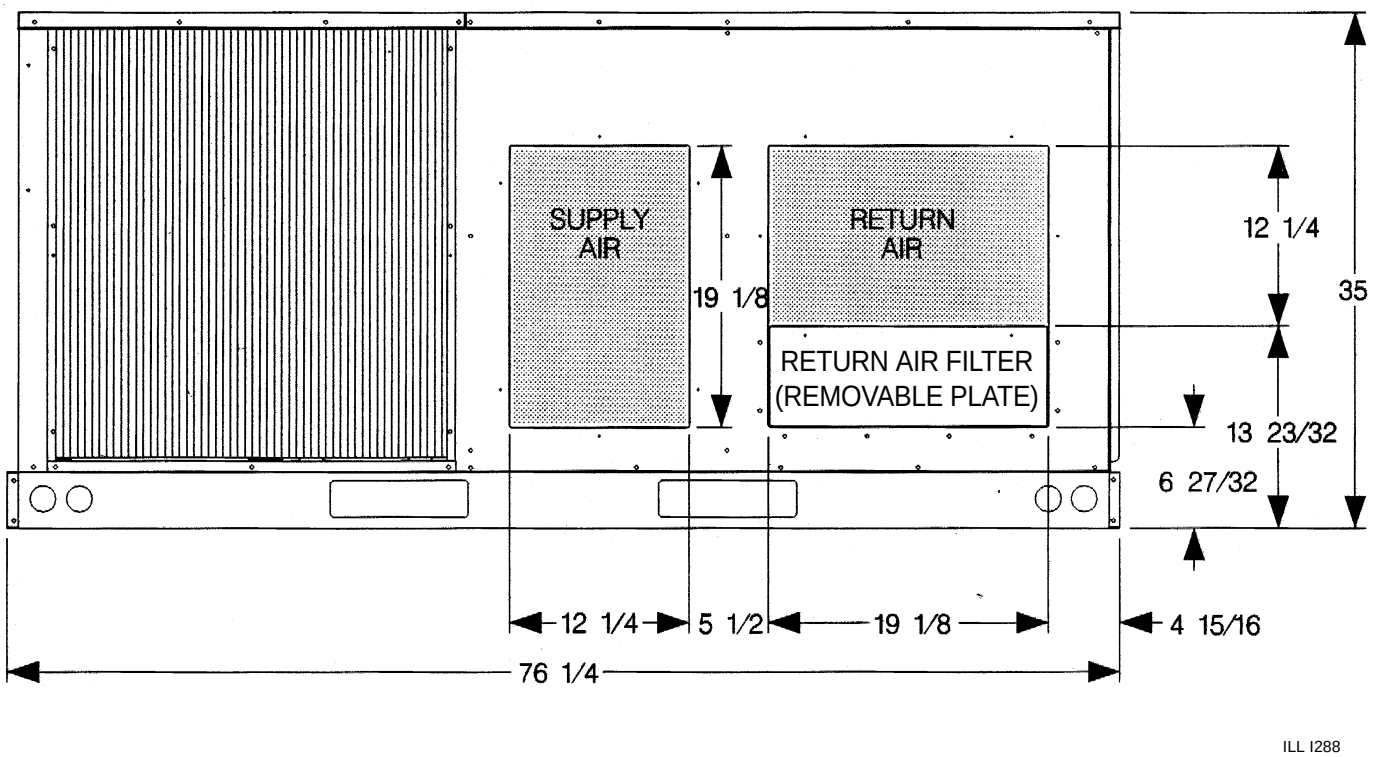


FIGURE 4
UNIT DIMENSIONS



V. INSTALLATION

A. GENERAL

1. PRE-INSTALLATION CHECK-POINTS

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

a. Structural strength of supporting members. (rooftop installation)
b. Clearances and provision for servicing.
c. Power supply and wiring.
d. Air duct connections.
e. Drain facilities and connections.
f. Location for minimum noise.

2. LOCATION

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

B. OUTSIDE SLAB INSTALLATION (Typical outdoor slab installations are shown in Figures 5 and 6.)

1. Select a location where external water drainage cannot collect around the unit.
2. Provide a level concrete slab extending 3" beyond all four sides of the unit. The slab should be sufficient above grade to prevent ground water from entering the unit. ***IMPORTANT:*** *To prevent transmission of noise or vibration, slab should not be connected to building structure.*
3. The location of the unit should be such as to provide proper access for inspection and servicing.
4. Locate unit where operating sounds will not disturb owner or neighbors.
5. Locate unit so roof runoff water does not pour directly on the unit. Provide gutter or other shielding at roof level. Do not locate unit in an area where excessive snow drifting may occur or accumulate.
6. It is essential that the unit be elevated above the base pad to allow for condensate drainage and possible refreezing of condensation. Provide a base pad which is slightly pitched away from the structure. Route condensate off base pad to an area which will not become slippery and result in personal injury.
7. Where snowfall is anticipated, the height of the unit above the ground level must be considered. Mount unit high enough to be above average area snowfall and to allow for proper condensate drainage.

C. CLEARANCES

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

1. Provide 48" minimum clearance at the front of the unit. Provide 36" minimum clearance at the left and right side of the unit for service access.
2. Provide 60" minimum clearance between top of unit and maximum 3 foot overhang.
3. Unit is design certified for application on combustible flooring with 0" minimum clearance.
4. See Figure 5 for illustration of minimum installation-service clearances.

FIGURE 5
PACKAGED HEAT PUMP
OUTSIDE SLAB INSTALLATION, BASEMENT OR CRAWL SPACE DISTRIBUTION SYSTEM

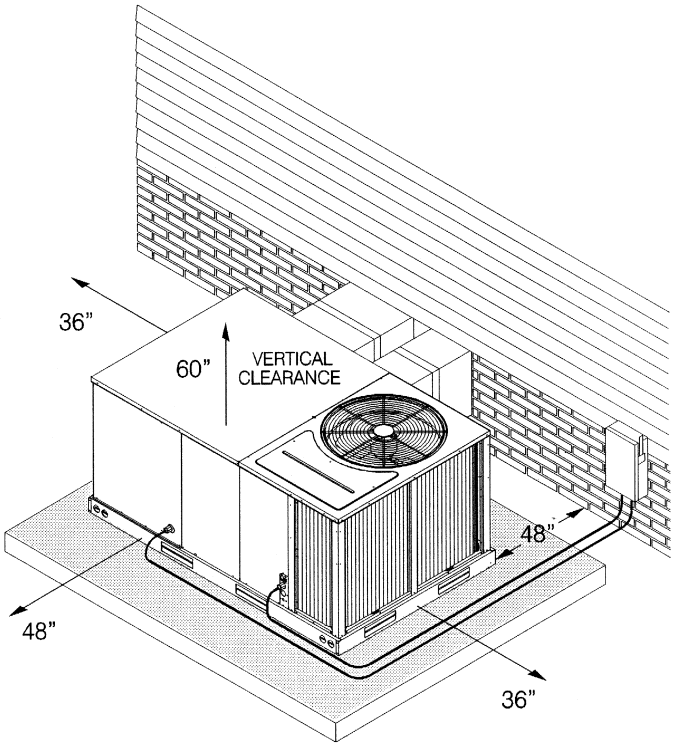


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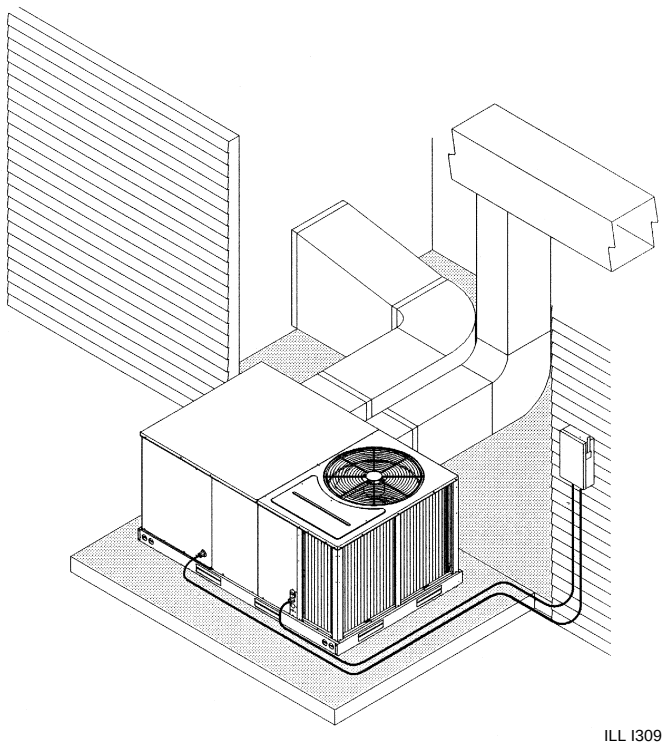
FIGURE 6
PACKAGED HEAT PUMP
OUTSIDE SLAB INSTALLATION, CLOSET DISTRIBUTION SYSTEM. SLAB FLOOR CONSTRUCTION



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D. ROOFTOP INSTALLATION

1. Before locating the unit on the roof, make sure that the strength of the roof and beams is adequate at that point to support the weight involved. (See specification sheet for weight of unit.) This is very important and user's responsibility.
2. For rigging and roofcurb details, see Figures 7 and 8. Use field-furnished spreaders.
3. For roofcurb assembly, see Roofcurb Installation Instructions.
4. If the roofcurb is not used, provisions for disposing of condensate water runoff during defrosting must be provided.
5. The unit should be placed on a solid and level roofcurb or platform of adequate strength. See Figure 9.
6. The location of the unit on the roof should be such as to provide proper access for inspection and servicing.

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

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

FIGURE 7
PACKAGED HEAT PUMP
RIGGING FOR LIFTING

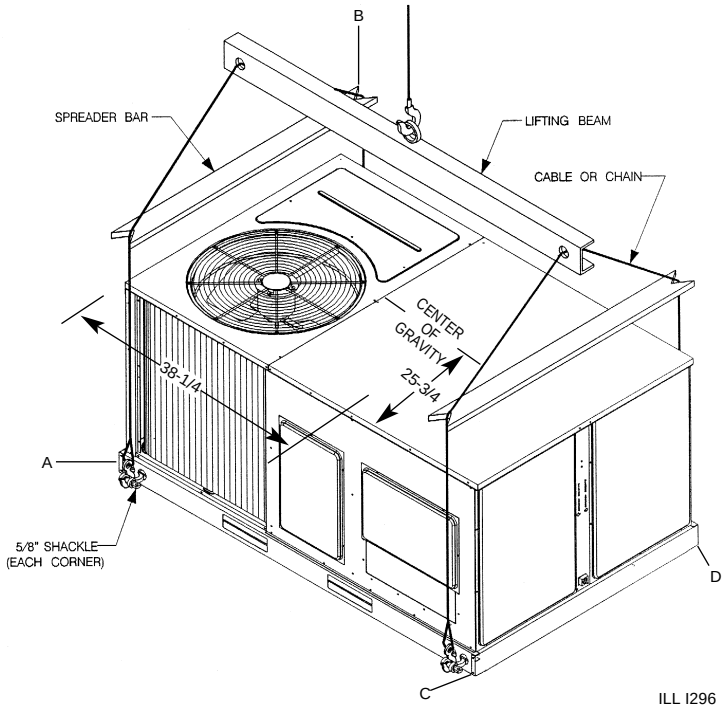
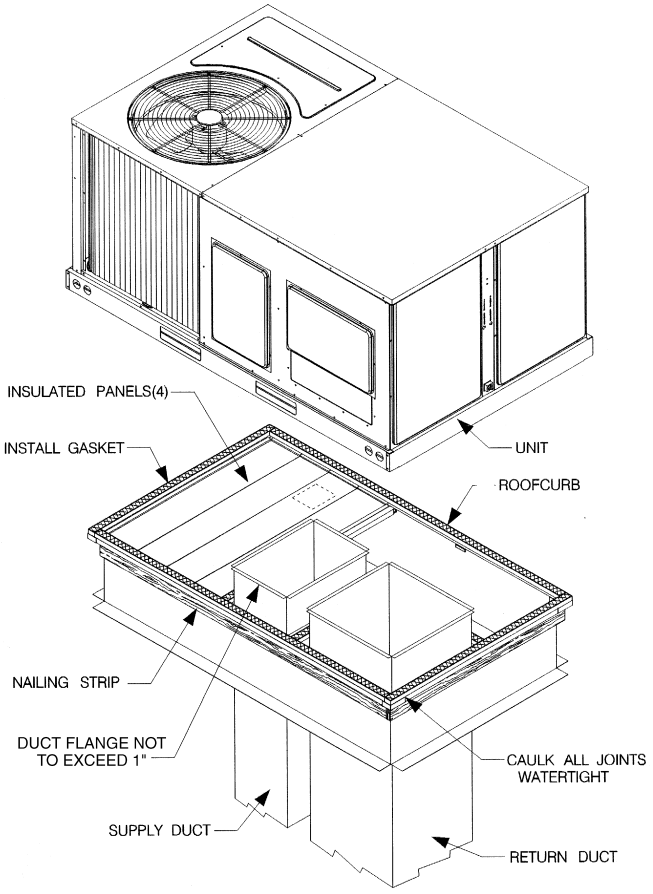
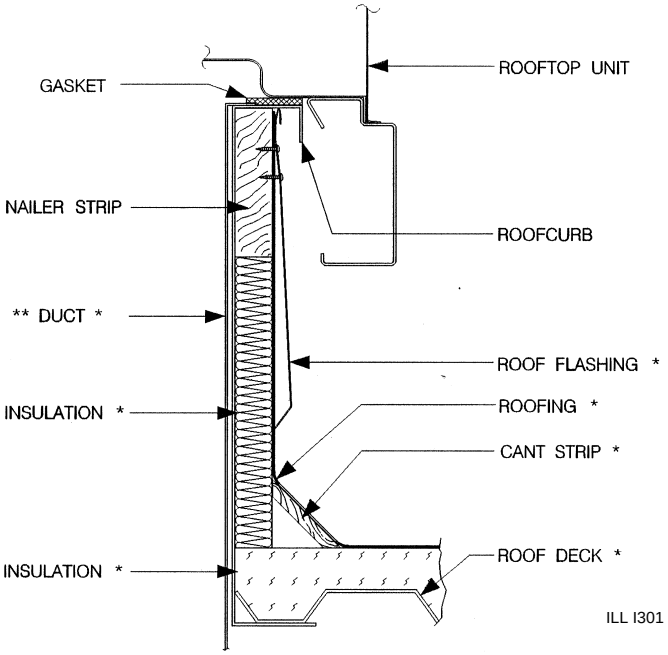


FIGURE 8
PACKAGED HEAT PUMP
ROOFCURB INSTALLATION





* BY CONTRACTOR

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

TABLE A. ELECTRICAL DATA - 10 SEER MODELS

UNIT MODEL (10 SEER) (-)JKA-	ELECTRICAL							
	PHASE HERTZ VOLTS	COMPRESSOR RLA	COMPR LRA	FULL LOAD AMPERES (FLA)		MINIMUM CIRCUIT AMPACITY AMPS	FUSE OR HACR CIRCUIT BREAKER	
				FAN MTR	BLWR MTR		MIN. AMPS	MAX. AMPS
A036JK	1-60-208/230	19.0/19.0	100	3.0	4.0	31/31	40/40	45/45
A036CK	1-60-208/230	13.0/13.0	77	3.0	4.0	24/24	30/30	35/35
A036DK	3-60-460	7.0	39	1.0	2.0	13	15	15
A036CL	1-60-208/230	13.0/13.0	77	3.0	3.0	23/23	30/30	35/35
A036CM	1-60-208/230	13.0/13.0	77	3.0	4.0	24/24	30/30	35/35
A036DL	3-60-460	7.0	39	1.0	2.0	12	15	15
A036DM	3-60-460	7.0	39	1.0	2.0	12	15	15
A036YL	3-60-575	6.0	31	1.0	2.0	11	15	15
A036YM	3-60-575	6.0	31	1.0	2.0	11	15	15
A042JK	1-60-208/230	23.0/23.0	127	3.0	4.0	36/36	45/45	50/50
A042CK	3-60-208/230	15.0/15.0	88	3.0	4.0	26/26	30/30	40/40
A042DK	3-60-460	7.0	44	1.0	2.0	14	20	20
A042CL	3-60-208/230	15.0/15.0	88	3.0	3.0	25/25	30/30	35/35
A042CM	3-60-208/230	15.0/15.0	88	3.0	4.0	26/26	30/30	40/40
A042DL	3-60-460	8.0	44	1.0	2.0	13	15	20
A042DM	3-60-460	8.0	44	1.0	2.0	13	15	20
A042YL	3-60-575	6.0	34	1.0	2.0	11	15	15
A042YM	3-60-575	6.0	34	1.0	2.0	11	15	15
A048JK	1-60-208/230	26.0/26.0	131	3.0	4.0	40/40	50/50	60/60
A048CK	3-60-208/230	15.0/15.0	91	3.0	4.0	29/29	35/35	45/45
A048DK	3-60-460	8.0	46	1.0	2.0	14	20	20
A048CL	3-60-208/230	15.0/15.0	91	3.0	3.0	25/25	30/30	35/35
A048CM	3-60-208/230	15.0/15.0	91	3.0	4.0	26/26	30/30	40/40
A048DL	3-60-460	8.0	46	1.0	2.0	13	15	20
A048DM	3-60-460	8.0	46	1.0	2.0	13	15	20
A048YL	3-60-575	6.0	37	1.0	2.0	11	15	15
A048YM	3-60-575	6.0	37	1.0	2.0	11	15	15
A060JK	1-60-208/230	35/35	169	3.0	4.9	52/52	70/70	80/80
A060CL	3-60-208/230	21.0/21.0	123	3.0	3.0	34/34	40/40	50/50
A060CM	3-60-208/230	21.0/21.0	123	3.0	4.0	34/34	40/40	50/50
A060DL	3-60-460	11.0	62	1.0	2.0	17	20/20	25
A060DM	3-60-460	11.0	62	1.0	2.0	17	20	25
A060YL	3-60-575	9.0	49	1.0	2.0	15	20	20
A060YM	3-60-575	9.0	49	1.0	2.0	15	20	20
A060CK	3-60-208/230	21	137	3.0	4.9	35	40	50
A060DK	3-60-460	11	62	1.0	2.7	18	25	25

TABLE B. PHYSICAL DATA - 10 SEER MODELS

PHYSICAL								
UNIT MODEL (10 SEER) (-)JKA-	**DRIVE TYPE**	**RECOMMENDED NO. AND SIZE [mm x mm x mm]**	**AREA SQ. FT. [M^2]**	**NO. ROWS**	**CFM [L/s]**	**R22 OZ. [g]**	**NET LBS. [kg]**	**SHIPPING LBS. [kg]**
A036JK	DIR	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.9 [1.570]	1.0	4000 [1888]	99 [2807]	480 [217.7]	495 [224.5]
A036CK	DIR	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.9 [1.570]	1.0	4000 [1888]	99 [2807]	480 [217.7]	495 [224.5]
A036DK	DIR	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.9 [1.570]	1.0	4000 [1888]	99 [2807]	480 [217.7]	495 [224.5]
A036CL	DIR	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.9 [1.570]	1.0	4000 [1888]	99 [2807]	480 [217.7]	495 [224.5]
A036CM	BELT	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.9 [1.570]	1.0	4000 [1888]	99 [2807]	480 [217.7]	495 [224.5]
A036DL	BELT	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.9 [1.570]	1.0	4000 [1888]	99 [2807]	480 [217.7]	495 [224.5]
A036DM	BELT	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.9 [1.570]	1.0	4000 [1888]	99 [2807]	480 [217.7]	495 [224.5]
A036YL	BELT	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.9 [1.570]	1.0	4000 [1888]	99 [2807]	480 [217.7]	495 [224.5]
A036YM	BELT	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.9 [1.570]	1.0	4000 [1888]	99 [2807]	480 [217.7]	495 [224.5]
A042JK	DIR	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.9 [1.570]	1.0	4000 [1888]	102 [2892]	485 [220.0]	500 [226.8]
A042CK	DIR	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.9 [1.570]	1.0	4000 [1888]	102 [2892]	485 [220.0]	500 [226.8]
A042DK	DIR	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.9 [1.570]	1.0	4000 [1888]	102 [2892]	485 [220.0]	500 [226.8]
A042CL	BELT	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.9 [1.570]	1.0	4000 [1888]	102 [2892]	485 [220.0]	500 [226.8]
A042CM	BELT	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.9 [1.570]	1.0	4000 [1888]	102 [2892]	485 [220.0]	500 [226.8]
A042DL	BELT	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.9 [1.570]	1.0	4000 [1888]	102 [2892]	485 [220.0]	500 [226.8]
A042DM	BELT	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.9 [1.570]	1.0	4000 [1888]	102 [2892]	485 [220.0]	500 [226.8]
A042YL	BELT	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.9 [1.570]	1.0	4000 [1888]	102 [2892]	485 [220.0]	500 [226.8]
A042YM	BELT	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.9 [1.570]	1.0	4000 [1888]	102 [2892]	485 [220.0]	500 [226.8]
A048JK	DIR	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.9 [1.570]	1.0	4000 [1888]	128 [3629]	496 [225.0]	511 [231.8]
A048CK	DIR	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.9 [1.570]	1.0	4000 [1888]	128 [3629]	496 [225.0]	511 [231.8]
A048DK	DIR	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.9 [1.570]	1.0	4000 [1888]	128 [3629]	496 [225.0]	511 [231.8]
A048CL	BELT	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.9 [1.570]	1.0	4000 [1888]	128 [3629]	496 [225.0]	511 [231.8]
A048CM	BELT	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.9 [1.570]	1.0	4000 [1888]	128 [3629]	496 [225.0]	511 [231.8]
A048DL	BELT	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.9 [1.570]	1.0	4000 [1888]	128 [3629]	496 [225.0]	511 [231.8]
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A048YL	BELT	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.9 [1.570]	1.0	4000 [1888]	128 [3629]	496 [225.0]	511 [231.8]
A048YM	BELT	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.9 [1.570]	1.0	4000 [1888]	128 [3629]	496 [225.0]	511 [231.8]
A060JK	BELT	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.9 [1.570]	1.0	4000 [1888]	138 [3912]	515 [233.6]	530 [240.4]
A060CL	BELT	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.9 [1.570]	1.0	4000 [1888]	138 [3912]	515 [233.6]	530 [240.4]
A060CM	BELT	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.9 [1.570]	1.0	4000 [1888]	138 [3912]	515 [233.6]	530 [240.4]
A060DL	BELT	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.9 [1.570]	1.0	4000 [1888]	138 [3912]	515 [233.6]	530 [240.4]
A060DM	BELT	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.9 [1.570]	1.0	4000 [1888]	138 [3912]	515 [233.6]	530 [240.4]
A060YL	BELT	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.9 [1.570]	1.0	4000 [1888]	138 [3912]	515 [233.6]	530 [240.4]
A060YM	BELT	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.9 [1.570]	1.0	4000 [1888]	138 [3912]	515 [233.6]	530 [240.4]
A060CK	BELT	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.9 [1.570]	1.0	4000 [1888]	138 [3912]	515 [233.6]	530 [240.4]
A060DK	BELT	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.9 [1.570]	1.0	4000 [1888]	138 [3912]	515 [233.6]	530 [240.4]

TABLE C. ELECTRICAL DATA - 12 SEER MODELS

UNIT MODEL (12 SEER) (-)JMA-	ELECTRICAL							
	PHASE HERTZ VOLTS	COMPRESSOR RLA	COMPR LRA	FULL LOAD AMPERES (FLA)		MINIMUM CIRCUIT AMPACITY AMPS	FUSE OR HACR CIRCUIT BREAKER	
				FAN MTR	BLWR MTR		MIN. AMPS	MAX. AMPS
A036JK	1-60-208/230	20.0/20.0	100	2.6	4.0	32/32	40/40	50/50
A036CK	3-60-208/230	12.0/12.0	77	2.6	4.0	22/22	25/25	30/30
A036DK	3-60-460	7.0	39	1.3	2.0	13	15	15
A036CL	3-60-208/230	12.0/12.0	77	2.6	3.0	22/22	25/25	30/30
A036CM	3-60-208/230	12.0/12.0	77	2.6	4.0	22/22	25/25	30/30
A036DL	3-60-460	7.0	39	1.3	2.0	12	15	15
A036DM	3-60-460	7.0	39	1.3	2.0	12	15	15
A036YL	3-60-575	6.0	31	0.8	2.0	11	15	15
A036YM	3-60-575	6.0	31	0.8	2.0	11	15	15
A042JK	1-60-208/230	21.0/21.0	104	2.6	4.0	32/32	40/40	50/50
A042CK	3-60-208/230	13.0/13.0	88	2.6	4.0	24/24	30/30	35/35
A042DK	3-60-460	8.0	44	1.3	2.0	14	20	20
A042CL	3-60-208/230	13.0/13.0	88	2.6	3.0	23/23	30/30	35/35
A042CM	3-60-208/230	13.0/13.0	88	2.6	4.0	23/23	30/30	40/40
A042DL	3-60-460	8.0	44	1.3	2.0	12	15	15
A042DM	3-60-460	8.0	44	1.3	2.0	12	15	15
A042YL	3-60-575	6.0	34	0.8	2.0	11	15	15
A042YM	3-60-575	6.0	34	0.8	2.0	11	15	15
A048JK	1-60-208/230	29.0/29.0	137	2.6	4.0	44/44	60/60	60/60
A048CK	3-60-208/230	17.5/17.5	99	2.6	4.0	29/29	35/35	45/45
A048DK	3-60-460	9.0	50	1.3	2.0	14	20	20
A048CL	3-60-208/230	17.5/17.5	99	2.6	3.0	28/28	35/35	40/40
A048CM	3-60-208/230	17.5/17.5	99	2.6	4.0	29/29	35/35	45/45
A048DL	3-60-460	9.0	50	1.3	2.0	15	20	20
A048DM	3-60-460	9.0	50	1.3	2.0	15	20	20
A048YL	3-60-575	7.0	40	0.8	2.0	13	15	20
A048YM	3-60-575	7.0	40	0.8	2.0	13	15	20
A060JL	1-60-208/230	33.0/33.0	169	2.6	4.0	49/49	60/60	80/80
A060CL	3-60-208/230	20.0/20.0	137	2.6	3.0	32/32	40/40	50/50
A060CM	3-60-208/230	20.0/20.0	137	2.6	4.0	32/32	40/40	50/50
A060DL	3-60-460	11.0	62	1.3	2.0	17	20	25
A060DM	3-60-460	11.0	62	1.3	2.0	17	20	25
A060YL	3-60-575	8.0/8.0	50	0.8	2.0	13	15	20
A060YM	3-60-575	8.0	50	0.8	2.0	13	15	20

TABLE D. PHYSICAL DATA - 12 SEER MODELS

PHYSICAL								
UNIT MODEL (12 SEER) (-)JMA-	**DRIVE TYPE**	**RECOMMENDED NO. AND SIZE [mm x mm x mm]**	**AREA SQ. FT. [M²]**	**NO. ROWS**	**CFM [L/s]**	**R22 OZ. [g]**	**NET LBS. [kg]**	**SHIPPING LBS. [kg]**
A036JK	DIR	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.6 [1.542]	2.0	4000 [1888]	160 [4536]	517 [234.5]	532 [241.3]
A036CK	DIR	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.6 [1.542]	2.0	4000 [1888]	160 [4536]	517 [234.5]	532 [241.3]
A036DK	DIR	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.6 [1.542]	2.0	4000 [1888]	160 [4536]	517 [234.5]	532 [241.3]
A036CL	BELT	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.6 [1.542]	2.0	4000 [1888]	160 [4536]	517 [234.5]	532 [241.3]
A036CM	BELT	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.6 [1.542]	2.0	4000 [1888]	160 [4536]	517 [234.5]	532 [241.3]
A036DL	BELT	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.6 [1.542]	2.0	4000 [1888]	160 [4536]	517 [234.5]	532 [241.3]
A036DM	BELT	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.6 [1.542]	2.0	4000 [1888]	160 [4536]	517 [234.5]	532 [241.3]
A036YL	BELT	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.6 [1.542]	2.0	4000 [1888]	160 [4536]	517 [234.5]	532 [241.3]
A036YM	BELT	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.6 [1.542]	2.0	4000 [1888]	160 [4536]	517 [234.5]	532 [241.3]
A042JK	DIR	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.6 [1.542]	2.0	4000 [1888]	160 [4536]	521 [236.3]	536 [243.1]
A042CK	DIR	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.6 [1.542]	2.0	4000 [1888]	160 [4536]	521 [236.3]	536 [243.1]
A042DK	DIR	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.6 [1.542]	2.0	4000 [1888]	160 [4536]	521 [236.3]	536 [243.1]
A042CL	BELT	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.6 [1.542]	2.0	4000 [1888]	160 [4536]	521 [236.3]	536 [243.1]
A042CM	BELT	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.6 [1.542]	2.0	4000 [1888]	160 [4536]	521 [236.3]	536 [243.1]
A042DL	BELT	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.6 [1.542]	2.0	4000 [1888]	160 [4536]	521 [236.3]	536 [243.1]
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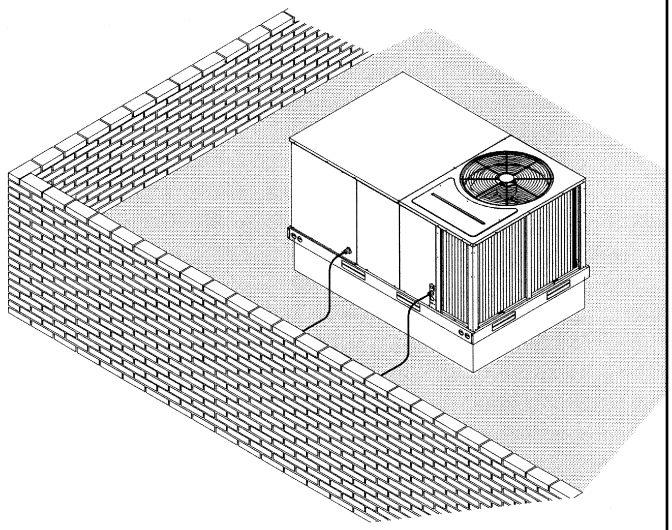
A042YL	BELT	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.6 [1.542]	2.0	4000 [1888]	160 [4536]	521 [236.3]	536 [243.1]
A042YM	BELT	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.6 [1.542]	2.0	4000 [1888]	160 [4536]	521 [236.3]	536 [243.1]
A048JK	DIR	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.6 [1.542]	2.0	4000 [1888]	187 [5301]	535 [242.7]	550 [249.5]
A048CK	DIR	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.6 [1.542]	2.0	4000 [1888]	187 [5301]	535 [242.7]	550 [249.5]
A048DK	DIR	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.6 [1.542]	2.0	4000 [1888]	187 [5301]	535 [242.7]	550 [249.5]
A048CL	BELT	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.6 [1.542]	2.0	4000 [1888]	187 [5301]	535 [242.7]	550 [249.5]
A048CM	BELT	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.6 [1.542]	2.0	4000 [1888]	187 [5301]	535 [242.7]	550 [249.5]
A048DL	BELT	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.6 [1.542]	2.0	4000 [1888]	187 [5301]	535 [242.7]	550 [249.5]
A048DM	BELT	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.6 [1.542]	2.0	4000 [1888]	187 [5301]	535 [242.7]	550 [249.5]
A048YL	BELT	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.6 [1.542]	2.0	4000 [1888]	187 [5301]	535 [242.7]	550 [249.5]
A048YM	BELT	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.6 [1.542]	2.0	4000 [1888]	187 [5301]	535 [242.7]	550 [249.5]
A060JL	BELT	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.6 [1.542]	2.0	4000 [1888]	160 [4536]	565 [256.3]	580 [263.1]
A060CL	BELT	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.6 [1.542]	2.0	4000 [1888]	160 [4536]	565 [256.3]	580 [263.1]
A060CM	BELT	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.6 [1.542]	2.0	4000 [1888]	160 [4536]	565 [256.3]	580 [263.1]
A060DL	BELT	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.6 [1.542]	2.0	4000 [1888]	160 [4536]	565 [256.3]	580 [263.1]
A060DM	BELT	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.6 [1.542]	2.0	4000 [1888]	160 [4536]	565 [256.3]	580 [263.1]
A060YL	BELT	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.6 [1.542]	2.0	4000 [1888]	160 [4536]	565 [256.3]	580 [263.1]
A060YM	BELT	(2) 1″ X 16″ X 25″ [25 X 406 X 635]	16.6 [1.542]	2.0	4000 [1888]	160 [4536]	565 [256.3]	580 [263.1]

FIGURE 9
PACKAGED HEAT PUMP
FLAT ROOFTOP INSTALLATION, ATTIC OR DROP CEILING DISTRIBUTION SYSTEM. MOUNTED ON ROOFCURB. CURB MUST BE LEVEL



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VI. DUCTWORK

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

⚠ WARNING

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

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

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

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

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

When installing ductwork, consider the following items:

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

VII. FILTERS

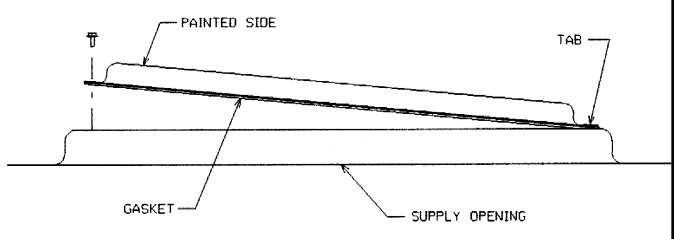
This unit is provided with 2 - 25" x 16" x 1" disposable filters. When replacing filters, ensure they are inserted fully to the back to prevent bypass.

VIII. CONVERSION PROCEDURE

DOWNFLOW TO HORIZONTAL

1. Remove the screws and covers from the outside of the supply and return sections.
2. Install the covers in the bottom supply and return openings with the painted side up. See Figure 10. Use the existing gasket to seal the covers.
3. Secure the supply cover to the base of the unit with 1 screw, engaging prepunched tab in unit base.
4. Secure the return cover to the base of the unit with screws, engaging prepunched holes in the unit base.

FIGURE 10
COVER GASKET DETAIL



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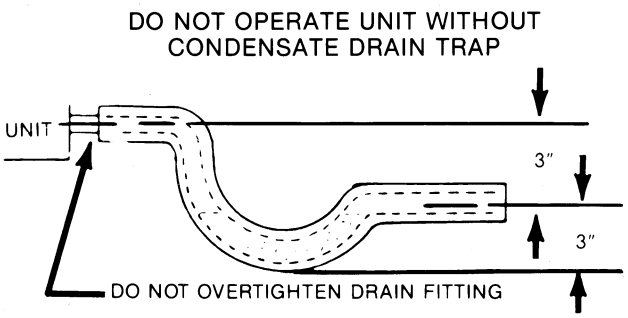
IX. CONDENSATE DRAIN

The condensate drain connection of the evaporator is 3/4" nominal female pipe thread. **IMPORTANT:** Install a condensate trap to ensure proper condensate drainage. See Figure 11.

FIGURE 11
CONDENSATE DRAIN



X. CONDENSATE DRAIN, OUTDOOR COIL

The outdoor coil during heating operation will sweat or run water off. The outdoor coil will also run water off during the defrost cycle. See Section V, Installation, Page 5 for mounting precautions.

XI. ELECTRICAL WIRING

Field wiring must comply with the National Electrical Code* and local ordinances that may apply.

*C.E.C. in Canada

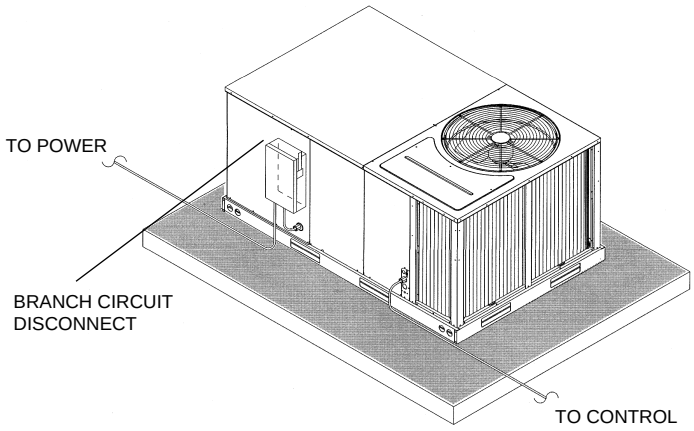
A. POWER WIRING

1. 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 rating plate. On three phase units, phases must be balanced within 3%.
2. ➤ Install a branch circuit disconnect within sight of the unit and of adequate size to handle the starting current. (See Tables A, C, L and M.) A bracket is supplied with the unit for mounting a disconnect to the unit. Refer to Figure 12 for proper location.
3. For branch circuit wiring (main power supply to unit disconnect), the minimum wire size can be determined from Table F using the circuit ampacity found on the unit nameplate or from Tables A, C, L and M.
4. This unit incorporates single point electrical connection for unit and electric heat accessory.
5. Power wiring must be run in grounded rain-tight conduit. Connect the power field wiring as follows:
   a. NO ELECTRIC HEAT - Connect the field wires directly to the contactor pigtails in the electric heat access area. Connect ground wire to ground lug.
   b. WITH ELECTRIC HEAT - Connect the field wires to the terminal block on the electric heater kit in the electric heat access area. Connect the ground wire to the ground lug on the heater kit.

NOTE: For field installation of a heater kit, follow the instructions provided with the heater kit.

6. The pigtail wires in the electric heat access area are factory wired to the contactor in the control box.
7. DO NOT connect aluminum field wires to electric heat kit power input terminals.

FIGURE 12
BRANCH CIRCUIT DISCONNECT LOCATION



B. SPECIAL INSTRUCTIONS FOR POWER WIRING WITH ALUMINUM CONDUCTORS.

1. Select the equivalent aluminum wire size from the tabulation below:

TABLE E. WIRE SIZES

AWG Copper Wire Size	AWG Aluminum Wire Size	Connector Type and Size (or equivalent)	
#12	#10	T&B Wire Nut	PT2
#10	#8	T&B Wire Nut	PT3
#8	#6	Ilsco Split Bolt	AK-6
#6	#4	Ilsco Split Bolt	AK-4
#4	#2	Ilsco Split Bolt	AK-2
#3	#1	Ilsco Split Bolt	AK-1/0
#2	#0	Ilsco Split Bolt	AK-1/0
#1	#00	Ilsco Split Bolt	AK-2/0
#0	#000	Ilsco Split Bolt	AK-4/0

2. Attach a length (6" or more) of recommended size copper wire to the unit terminals L1 and L3 for single phase, L1, L2, L3 for three phase.
3. Splice copper wire pigtails to aluminum wire with U.L. recognized connectors for copper-aluminum splices. Follow these instructions very carefully to make a positive and lasting connection;
   a. Strip insulation from aluminum conductor.
   b. Coat the stripped end of the aluminum wire with the recommended inhibitor and wire brush aluminum surface through inhibitor. Inhibitors: Brundy, Pentex “A”; Alcoa, No. 2EJC; T&B KPOR Shield.
   c. Clean and recoat aluminum conductor with inhibitor.
   d. Make the splice using the above listed wire nuts or split bolt connectors.
   e. Coat the entire connection with inhibitor and wrap with electrical insulating tape.

WARRANTY MAY NOT APPLY IF CONNECTIONS ARE NOT MADE PER INSTRUCTIONS

C. CONTROL WIRING (Class II)

1. Low voltage wiring should not be run in conduit with power wiring.
2. Control wiring is routed through the 7/8" hole adjacent to the compressor access panel. See Figure 2. Use a minimum #18 AWG thermostat wire. For wire lengths exceeding 50', use #16 AWG thermostat wire. The low voltage

wires are connected to the unit pigtails which are supplied with the unit below the unit control box.

3. It is necessary that only heat pump thermostats be used. Please contact your distributor for part number information. See Table F.
4. Figure 14 shows representative low voltage connection diagrams. Read your thermostat installation instructions for any special requirements for your specific thermostat.

   NOTE — Units installed in Canada require that an outdoor thermostat (30,000 min. cycles of endurance) be installed and be wired with C.E.C. Class I wiring.

D. INTERNAL WIRING
   1. A diagram of the internal wiring of this unit is located on the inside of the compressor access panel. If any of the original wire as supplied with the appliance must be replaced, the wire gauge and insulation must be the same as original wiring.

E. GROUNDING

⚠ WARNING

THE UNIT MUST BE PERMANENTLY GROUNDED. A GROUNDING LUG IS PROVIDED IN THE ELECTRIC HEAT ACCESS AREA FOR A GROUND WIRE. FAILURE TO GROUND THIS UNIT CAN RESULT IN FIRE OR ELECTRICAL SHOCK CAUSING PROPERTY DAMAGE, SEVERE PERSONAL INJURY OR DEATH.

GROUNDING MAY ALSO BE ACCOMPLISHED BY GROUNDING THE POWER LINE CONDUIT TO THE UNIT. MAKE SURE THE CONDUIT NUT LOCKING TEETH HAVE PIERCED THE INSULATING PAINT FILM OF THE SIDE PANEL.

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

TABLE F RECOMMENDED HEAT PUMP THERMOSTATS

MANUFACTURER	MODEL	SUB-BASE	COOLING STAGES	HEATING STAGES
UNITS WITHOUT ECONOMIZER				
HONEYWELL	T7300A1005	Q7300C1006	1	2
	T86711R1166	INCLUDED	1	2
	T874R	INCLUDED	1	2
	T841A1209	INCLUDED	1	2
	T874G1881	Q674F1360	1	2
	T8141A	INCLUDED	1	2
GENERAL ELECTRIC	3AAT86B8A2	INCLUDED	1	2
	3AAT83D9C1	INCLUDED	1	2
WHITE-RODGERS	1F59-057	INCLUDED	1	2
	1F92-71	INCLUDED	1	2
MAPLE CHASE	962-0	INCLUDED	1	2
	962-1	INCLUDED	1	2
UNITS WITH ECONOMIZER				
HONEYWELL	T8743W1031	INCLUDED	3	2

FIGURE 13
HEATER KIT INSTALLATION

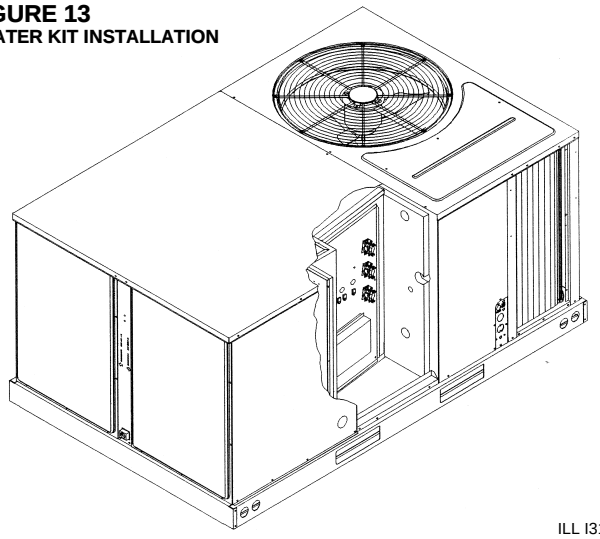


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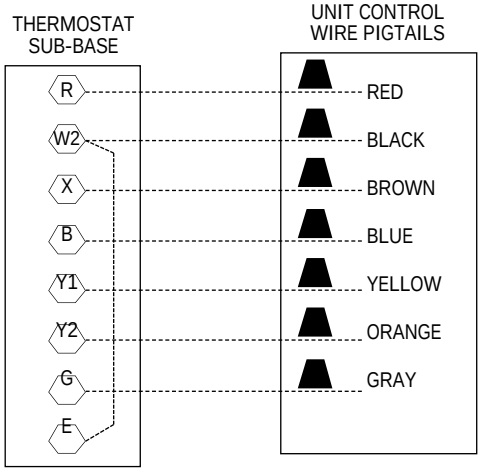
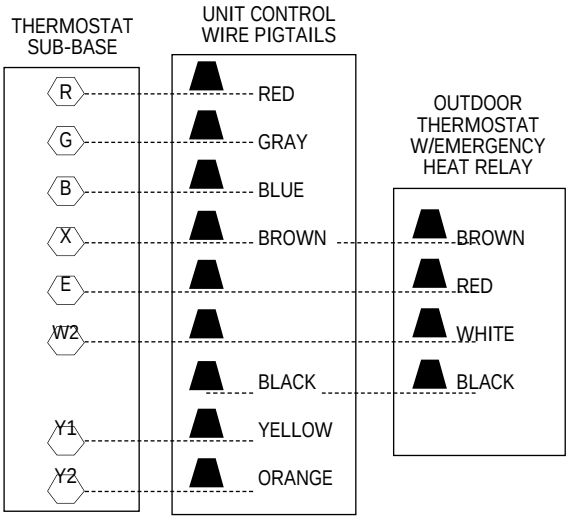
FIGURE 14
VOLTAGE CONNECTIONS DIAGRAMS

STANDARD



WITH ONE OUTDOOR THERMOSTAT W/EMERGENCY HEAT RELAY



NOTES: IF EMERGENCY HEAT RELAY AND OUTDOOR THERMOSTATS ARE NOT USED, A JUMPER BETWEEN "W2" AND "E" CAN BE INSTALLED TO TRANSFER CONTROL OF HEATING TO THE FIRST STAGE WHEN THE SYSTEM SWITCH IS IN THE EMERGENCY HEAT POSITION.

Y2 IS ONLY USED WITH OPTIONAL ECONOMIZER.

TABLE G. DIRECT-DRIVE BLOWER AIRFLOW PERFORMANCE

UNIT MODEL	FACTORY MOTOR SPEED	MOTOR HP	# OF MOTOR SPEEDS	BLOWER SIZE	MOTOR SPEED	CFM AIR DELIVERY (WATTS) – 208 VOLTS SIDE DISCHARGE - DRY COIL EXTERNAL STATIC PRESSURE (I.W.C.)						CFM AIR DELIVERY (WATTS) – 230 VOLTS SIDE DISCHARGE - DRY COIL EXTERNAL STATIC PRESSURE (I.W.C.)					
						0.1	0.2	0.3	0.4	0.5	0.6	0.1	0.2	0.3	0.4	0.5	0.6
10 & 12 SEER -036	LOW	1/2	3	10 X 10	LOW	1275	1235	1210	1181	1132	1045	1455	1423	1388	1345	1289	1214
						(493)	(481)	(468)	(452)	(431)	(402)	(578)	(565)	(549)	(528)	(502)	(472)
10 & 12 SEER -042	MEDIUM				MEDIUM	1397	1344	1319	1297	1249	1147	1601	1561	1517	1466	1401	1317
						(561)	(537)	(522)	(508)	(488)	(454)	(659)	(636)	(613)	(589)	(562)	(529)
10 & 12 SEER -048	HIGH				HIGH	1766	1719	1671	1617	1550	1465	1964	1902	1839	1771	1693	1602
						(735)	(719)	(697)	(671)	(639)	(603)	(847)	(811)	(780)	(751)	(721)	(688)
	LOW	3/4	3	10 x 10	LOW	1352	1348	1344	1339	1307	1252	786	779	772	764	748	716
						(638)	(619)	(600)	(576)	(542)	(505)	(757)	(729)	(694)	(664)	(628)	(583)
10 SEER -060	MEDIUM				MEDIUM	1939	1914	1876	1823	1750	1651	2152	2096	2031	1955	1864	1756
						(893)	(860)	(822)	(780)	(732)	(677)	(975)	(925)	(879)	(833)	(784)	(731)
	HIGH				HIGH	2280	2201	2119	2043	1943	1839	2371	2292	2196	2107	2010	1889
						(1052)	(995)	(943)	(900)	(849)	(800)	(1101)	(1062)	(1015)	(971)	(927)	(874)

TABLE H. BELT-DRIVE AIRFLOW PERFORMANCE

AIR FLOW CFM	CAPACITY 3 & 3.5 TON HEAT PUMP (10 & 12 SEER) VOLTAGE 208-230, 460 & 575 - 3 PHASE EXTERNAL STATIC PRESSURE - INCHES OF WATER																												AIR FLOW CFM
	0.1		0.2		0.3		0.4		0.5		0.6		0.7		0.8		0.9		1.0		1.1		1.2		1.3		1.4		1.5		
	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	
900	—	—	—	—	665	290	730	300	780	315	830	330	875	360	920	375	960	390	990	410	1040	445	1080	470	1140	510	1190	540	1235	590	900
1000	—	—	625	275	680	295	750	310	805	325	850	345	895	375	935	390	970	410	1015	435	1065	465	1100	500	1160	530	1210	560	1255	610	1000
1100	—	—	640	300	710	315	780	325	830	340	875	365	915	390	955	405	990	430	1040	450	1080	485	1115	540	1180	540	1230	600	1270	630	1100
1200	—	—	670	315	735	330	800	345	850	365	890	385	935	410	975	430	1010	450	1060	475	1100	520	1145	560	1200	600	1250	630	1285	660	1200
1300	625	315	700	330	770	350	830	370	875	400	915	415	955	440	990	450	1040	495	1085	530	1125	565	1165	590	1220	645	1260	675	1305	710	1300
1400	655	340	730	365	795	385	850	400	890	430	935	445	975	470	1010	500	1070	540	1110	575	1150	615	1195	645	1230	685	1280	725	1325	760	1400
1500	685	380	755	390	825	415	870	435	915	450	955	480	990	505	1040	545	1090	590	1135	630	1180	660	1220	720	1255	740	1295	785	1350	820	1500
1600	730	420	790	435	850	455	890	490	935	505	970	525	1005	550	1075	605	1110	640	1160	680	1200	730	1245	780	1280	800	1325	840	1365	885	1600
1700	755	465	825	475	875	505	915	535	955	550	985	570	1040	630	1100	685	1135	710	1185	750	1225	800	1265	830	1295	875	1350	910	—	—	1700

DRIVE PACKAGE	L							M							N (FIELD-SUPPLIED)
MOTOR H.P.	1/2 (3/4 - 575V)							3/4							3/4
BLOWER SHEAVE	6.9 PITCH DIAMETER							6.4 PITCH DIAMETER							6.4 PITCH DIAMETER
MOTOR SHEAVE	ADJUSTABLE 2.4 - 3.4 PITCH DIAMETER							ADJUSTABLE 3.4 - 4.4 PITCH DIAMETER							ADJUSTABLE 4.0 - 5.0 PITCH DIAMETER
TURNS OPEN	0	1	2	3	4	5	6	0	1	2	3	4	5	6	
RPM	935	875	830	780	730	680	625	1295	1230	1185	1135	1085	1000	955	RPM RANGE 1090 - 1365

TABLE I. BELT-DRIVE AIRFLOW PERFORMANCE

AIR FLOW CFM	CAPACITY 4 TON HEAT PUMP (10 & 12 SEER) VOLTAGE 208-230, 460 & 575 - 3 PHASE EXTERNAL STATIC PRESSURE - INCHES OF WATER																														AIR FLOW CFM
	0.1		0.2		0.3		0.4		0.5		0.6		0.7		0.8		0.9		1.0		1.1		1.2		1.3		1.4		1.5		
	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	
1200	—	—	—	—	745	340	810	375	865	390	900	400	945	420	1000	440	1040	460	1075	490	1115	540	1170	580	1215	620	1260	650	1300	685	**1200**
1300	—	—	695	330	770	365	835	395	880	415	920	435	975	455	1010	470	1060	490	1100	530	1140	570	1190	600	1235	640	1270	685	1315	740	**1300**
1400	—	—	725	350	795	395	855	420	895	435	945	455	995	470	1030	500	1070	520	1115	560	1160	600	1205	640	1250	685	1290	745	1335	810	**1400**
1500	690	360	750	390	820	425	875	450	920	465	970	480	1010	500	1055	560	1100	580	1140	630	1180	660	1230	700	1270	760	1315	815	1350	865	**1500**
1600	720	390	780	430	850	460	895	480	945	500	990	530	1035	565	1075	590	1115	635	1160	680	1205	725	1250	770	1290	830	1335	890	1365	935	**1600**
1700	750	430	810	465	870	485	920	500	970	530	1015	570	1055	600	1090	645	1140	695	1180	735	1225	790	1270	845	1315	910	1350	960	—	—	**1700**
1800	780	475	840	515	895	540	945	555	990	600	1035	625	1080	660	1115	710	1155	740	1205	800	1250	860	1295	930	1340	995	1365	1030	—	—	**1800**
1900	820	520	870	560	925	580	970	600	1015	640	1060	690	1115	750	1145	790	1185	835	1225	880	1275	900	1315	1010	1355	1060	—	—	—	—	**1900**
2000	850	585	900	610	950	630	1000	665	1045	715	1090	760	1130	810	1170	865	1205	900	1255	965	1300	1050	1340	1100	1365	1140	—	—	—	—	**2000**

DRIVE PACKAGE	L							M							N (FIELD-SUPPLIED)
MOTOR H.P.	1/2 (3/4 - 575V)							3/4							3/4
BLOWER SHEAVE	6.9 PITCH DIAMETER							6.4 PITCH DIAMETER							6.4 PITCH DIAMETER
MOTOR SHEAVE	ADJUSTABLE 2.8 - 3.8 PITCH DIAMETER							ADJUSTABLE 3.4 - 4.4 PITCH DIAMETER							ADJUSTABLE 4.0 - 5.0 PITCH DIAMETER
TURNS OPEN	0	1	2	3	4	5	6	0	1	2	3	4	5	6	
RPM	990	945	895	850	800	750	695	1270	1225	1170	1115	1065	1015	965	RPM RANGE 1090 - 1365

TABLE J. BELT-DRIVE AIRFLOW PERFORMANCE 5 TON - 10 & 12 SEER, SINGLE PHASE MODEL

AIR FLOW CFM	CAPACITY 5 TON - 12 SEER VOLTAGE 208-230 - SINGLE PHASE 208 VOLT-EXTERNAL STATIC PRESSURE														230 VOLT-EXTERNAL STATIC PRESSURE														AIR FLOW CFM
	0.1		0.2		0.3		0.4		0.5		0.6		0.7		0.1		0.2		0.3		0.4		0.5		0.6		0.7		
	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	
1600	770	410	835	440	880	460	940	490	980	500	1015	540	—	—	770	400	835	425	880	445	940	475	980	490	1015	530	1065	560	**1600**
1700	825	460	860	450	925	520	955	540	1010	560	1035	590	—	—	825	440	860	470	925	490	955	515	1010	540	1035	580	—	—	**1700**
1800	860	520	905	540	945	565	995	580	1030	630	1045	650	—	—	860	500	905	525	945	540	995	570	1030	605	1045	640	—	—	**1800**
1900	905	565	945	600	980	640	1010	660	1040	710	—	—	—	—	905	555	945	575	580	600	1010	650	1040	670	1065	710	—	—	**1900**
2000	905	640	980	670	1010	710	1030	740	—	—	—	—	—	—	950	620	980	640	1010	700	1030	730	1065	750	—	—	—	—	**2000**
2100	990	730	1015	760	1040	800	—	—	—	—	—	—	—	—	990	690	1015	720	1040	750	1065	790	—	—	—	—	—	—	**2100**
2200	1030	825	1040	870	—	—	—	—	—	—	—	—	—	—	1030	760	1040	790	—	—	—	—	—	—	—	—	—	—	**2200**
2300	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1060	860	—	—	—	—	—	—	—	—	—	—	—	—	**2300**

DRIVE PACKAGE	"L" — 208 VOLTS							"L" — 230 VOLTS						
MOTOR H.P.	3/4 - 4 POLE - SINGLE PHASE							3/4 - 4 POLE - SINGLE PHASE						
BLOWER SHEAVE	6.4 PITCH DIAMETER							6.4 PITCH DIAMETER						
MOTOR SHEAVE	2.8-3.8 PITCH DIAMETER - ADJ.							2.8-3.8 PITCH DIAMETER - ADJ.						
TURNS OPEN	0	1	2	3	4	5	6	0	1	2	3	4	5	6
RPM	1045	1000	955	905	860	810	745	1065	1025	980	930	880	830	765

TABLE K. BELT DRIVE AIRFLOW PERFORMANCE – 5 TON 10 & 12 SEER 3 PHASE MODELS

AIR FLOW CFM	CAPACITY: 5 TON - 10 & 12 SEER VOLTAGE: 208-230, 460 & 575 - 3 PHASE EXTERNAL STATIC PRESSURE–INCHES OF WATER																													
	0.1		0.2		0.3		0.4		0.5		0.6		0.7		0.8		0.9		1.0		1.10		1.20		1.30		1.40		1.50	
	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS
1400	—	—	—	—	780	370	815	385	875	425	930	460	970	490	1030	540	1065	570	1105	595	1150	615	1195	645	1235	660	1300	705	1340	745
1500	—	—	—	—	795	405	840	415	895	440	945	500	995	540	1045	595	1080	615	1135	650	1165	675	1215	700	1255	735	1320	775	1355	805
1600	—	—	780	390	805	425	870	470	915	510	965	560	1015	600	1060	640	1105	680	1145	705	1180	730	1225	750	1275	790	1340	840	1365	880
1700	—	—	795	450	840	490	895	530	940	570	990	605	1035	640	1075	680	1120	725	1160	755	1200	790	1245	815	1300	855	1355	905	1375	940
1800	780	455	815	470	870	540	915	540	965	675	1010	660	1055	710	1100	760	1140	785	1175	810	1225	850	1260	880	1320	930	1365	985	1390	1020
1900	800	485	850	530	895	590	945	640	995	675	1035	720	1070	775	1120	810	1160	850	1200	890	1245	915	1290	960	1335	1000	1375	1050	1405	1100
2000	830	550	880	605	930	655	970	700	1015	730	1055	790	1105	830	1145	875	1180	910	1225	950	1260	980	1320	1035	1350	1075	1385	1120	—	—
2100	860	615	915	655	955	705	1005	760	1040	820	1090	870	1130	910	1170	950	1210	995	1250	1020	1290	1060	1335	1100	1370	1150	1400	1200	—	—
2200	895	680	945	735	995	780	1030	830	1060	880	1120	940	1155	980	1195	1020	1240	1055	1275	1100	1320	1140	1360	1180	1385	1225	—	—	—	—
2300	940	755	975	795	1015	830	1065	910	1100	965	1150	1025	1180	1050	1225	1095	1265	1125	1310	1175	1350	1230	1375	1260	1405	1320	—	—	—	—
2400	970	825	1015	880	1040	925	1100	1005	1145	1055	1175	1085	1225	1140	1260	1175	1300	1210	1340	1255	1370	1315	1400	1375	—	—	—	—	—	—

DRIVE PACKAGE	"L"							"M"						
MOTOR H.P.	3/4							1						
BLOWER SHEAVE	6.4 PITCH DIAMETER							6.4 PITCH DIAMETER						
MOTOR SHEAVE	2.8-3.8 PITCH DIAMETER - ADJ.							3.4-4.4 PITCH DIAMETER - ADJ.						
TURNS OPEN	0	1	2	3	4	5	6	0	1	2	3	4	5	6
RPM	1095	1040	995	940	890	835	780	1405	1360	1305	1250	1195	1145	1095

TABLE L. COPPER WIRE SIZE — AWG (1% VOLTAGE DROP)

	300	4	3	2	2	1	1/0	1/0	2/0	2/0	3/0	3/0	3/0	4/0	4/0	4/0	4/0	250	250	250	250	300	300	300	300	300	350	350	350	350
Supply	250	4	4	3	3	2	1	1	1/0	1/0	2/0	2/0	2/0	3/0	3/0	3/0	4/0	4/0	4/0	4/0	4/0	250	250	250	250	250	350	350	350	350
Wire	200	6	4	4	4	3	2	2	1	1	1/0	1/0	1/0	2/0	2/0	2/0	3/0	3/0	3/0	3/0	3/0	4/0	4/0	4/0	4/0	4/0	300	300	300	300
Length	150	8	6	6	4	4	4	3	3	2	2	1	1	1/0	1/0	1/0	1/0	2/0	2/0	2/0	2/0	2/0	3/0	3/0	3/0	3/0	4/0	4/0	4/0	4/0
Feet	100	10	8	8	6	6	6	4	4	4	3	3	2	2	2	1	1	1	1	1	1/0	1/0	1/0	1/0	1/0	1/0	1/0	2/0	2/0	2/0
	50	14	12	10	10	8	8	6	6	6	4	4	4	3	3	3	2	2	2	2	2	1	1	1	1	1/0	1/0	1/0	1/0	2/0
		15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155
																		Circuit Ampacity												

NOTE:
1. Wire size based on 60ºC type copper conductors below 100 ampacity. 2. Wire size based on 75ºC type copper conductors for 100 ampacity and above.

XII. INDOOR AIR FLOW DATA

Direct-drive blower models are shipped factory wired for the proper speed at a typical external static. See Table F for blower performance. Belt-drive blower models have motor sheaves set for proper CFM at a typical external static. See Tables G - K for blower performance.

XIII. CRANKCASE HEAT (OPTIONAL)

Crankcase heat is not required on scroll type compressors, but may be necessary for difficult starting situations.

XIV. PRE-START CHECK

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

XV. STARTUP

1. Turn thermostat to “OFF,” turn “on” power supply at disconnect switch.
2. Turn temperature setting as high as it will go.
3. Turn fan switch to “ON.”
4. Indoor blower should run. Be sure it is running in the right direction.
5. Turn fan switch to “AUTO.” Turn system switch to “COOL” and turn temperature setting below room temperature. Unit should run in cooling mode.
6. Is outdoor fan operating correctly in the right direction?
7. Is compressor running correctly.
8. Turn thermostat system switch to “HEAT.” Unit should stop. Wait 5 minutes, then raise temperature setting to above room temperature. Unit should run in heating mode and after about 30 to 50 seconds auxiliary heaters, if installed, should come on.
9. Check the refrigerant charge using the instructions located on compressor access panel cover. Replace service port caps. Service port cores are for system access only and will leak if not tightly capped.
10. Turn thermostat system switch to proper mode “HEAT” or “COOl” and set thermostat to proper temperature setting. Record the following after the unit has run some time.
    A. Operating Mode _____
    B. Discharge Pressure (High) _____PSIG
    C. Vapor Pressure at Compressor (Low) _____PSIG
    D. Vapor Line Temperature at Compressor _____°F.
    E. Indoor Dry Bulb_____°F.

    F. Indoor Wet Bulb _____°F.
    G. Outdoor Dry Bulb _____°F.
    H. Outdoor Wet Bulb_____°F.
    I. Voltage at Contactor _____Volts
    J. Current at Contactor _____Amps
    K. Model Number_____
    L. Serial Number _____
    M. Location_____
    N. Owner _____
    O. Date_____
11. Adjust discharge air grilles and balance system.
12. Check ducts for condensation and air leaks.
13. Check unit for tubing and sheet metal rattles.
14. Instruct the owner on operation and maintenance.
15. Leave “INSTALLATION” and ”USE AND CARE“ instructions with owner

XVI. OPERATION

Most single phase units are operated PSC (no start relay or start capacitor). It is important that such systems be off for a minimum of 5 minutes before restarting to allow equalization of pressures. The thermostat should not be moved to cycle unit without waiting five minutes. To do so may cause the compressor to stop on an automatic open overload device or blow a fuse. Poor electrical service can cause nuisance tripping in overloads or blow fuses.

IMPORTANT: *The compressor has an internal overload protector. Under some conditions, it can take up to 2 hours for this overload to reset. Make sure overload has had time to reset before condemning the compressor.*

Some units are equipped with a time delay control (TDC1). The control allows the blower to operate for up to 90 seconds after the thermostat is satisfied.

XVII. AUXILIARY HEAT

The amount of auxiliary heat required depends on the heat loss of the structure to be heated and the capacity of the heat pump. It is good practice to install strip heat to maintain at least 60ºF indoor temperatures in case of compressor failure. The auxiliary heat is energized by the second stage of the thermostat. The amount of electric heat that is allowed to come on, as determined by the output of the heat pump, may be controlled by an outdoor thermostat.

⚠ WARNING

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

A. CONTROL SYSTEM OPERATION

1. In the cooling mode, the thermostat will, on a call for cooling, energize the compressor contactor and the indoor blower relay. The indoor blower can be operated continuously by setting the thermostat fan switch at the "ON" position. The reversing valve coil is de-energized.
2. In the heating mode, the first heat stage of the thermostat will energize the compressor contactor and the indoor blower relay. The second heat stage will turn on one or more supplementary resistance heaters. The reversing valve is energized except in defrost. If required or considered desirable, the resistance heat may also be controlled by outdoor thermostats.

XVIII. TIME-TEMPERATURE DEFROST TIMER (SOLID STATE)

A. OPERATION — In operation, power is provided to the circuit board when the thermostat selector switch is in the heat position through terminals marked "24 VAC" and "COM." Timing periods of 50, 70, or 90 minutes between defrosts may be selected by connecting the circuit board jumper wire to T_1, T_2, T_3, respectively.

Accumulation of time for the timing period selected starts and stops with the wall thermostat call for heating through "hold" or "H" terminal on circuit board.

If the defrost sensor is not closed after the timing period, the control board is reset to zero and another timing period is started.

If closed, the defrost sensor will provide power from the common side of the transformer to terminal on the circuit board marked "SEN," providing power to the defrost relay (DR) through the "out" terminal permitting defrost. The sensor closes at 30°F ± 3°F.

The defrost temperature sensor is clamped to a distributor tube on the outdoor coil.

The defrost cycle is terminated and the timing is reset when the sensor opens at 70°F. If the defrost cycle is not terminated due to sensor temperature, a 10 minute override terminates the defrost period and resets the timing period.

B. TEST TERMINALS — To initiate a defrost cycle, the two "TST" pins should be shorted together until a defrost cycle is initiated. The sensor must also be closed or jumpered to initiate a defrost. All timing functions are sped up by a factor of 256 from 50, 70 or 90 minutes to 11.7, 16.4 or 21.1 seconds. After defrost initiation, the short must be instantly removed or the defrost period will last only 2.3 seconds.

REPLACEMENT PARTS

Contact your local distributor for a complete parts list.

CHARGE INFORMATION

Refer to the appropriate charge chart included in this manual.

TROUBLESHOOTING

Refer to the troubleshooting chart included in this manual.

WIRING DIAGRAMS

Refer to the appropriate wiring diagram included in this manual.

XIX. HEATER KIT CHARACTERISTICS

AUXILIARY HEATER KITS CHARACTERISTICS AND APPLICATION – 10 SEER MODELS

UNIT MODEL (10 SEER)	HEATER KIT MODEL NO.	HEATER KW @ 208/240*	HEATER KIT FLA	UNIT MIN. CKT. AMPACITY	MAX. FUSE OR CKT. BKR. SIZE (CKT. BKR. MUST BE HACR TYPE FOR USA)
A036JK	A06J A10J A11J A12J A15J A20J A21J	4.2 / 5.6 7.2 / 9.6 7.2 / 9.6 8.4 / 11.2 10.8 / 14.4 14.4 / 19.2 14.4 / 19.2	20.2 / 23.3 34.7 / 40.0 34.7 / 40.0 40.4 / 46.7 52.0 / 60.0 69.3 / 80.0 69.3 / 80.0	57 / 60 75 / 81 75 / 81 82 / 90 96 / 106 118 / 131 118 / 131	60 / 70 80 / 90 80 / 90 90 / 90 100 / 110 125 / 150 125 / 150
A042JK	A06J A10J A11J A12J A15J A20J A21J	4.2 / 5.6 7.2 / 9.6 7.2 / 9.6 8.4 / 11.2 10.8 / 14.4 14.4 / 19.2 14.4 / 19.2	20.2 / 23.3 34.7 / 40.0 34.7 / 40.0 40.4 / 46.7 52.0 / 60.0 69.3 / 80.0 69.3 / 80.0	62 / 65 80 / 86 80 / 86 87 / 95 101 / 111 123 / 136 123 / 136	70 / 80 90 / 90 90 / 90 90 / 100 110 / 125 125 / 150 125 / 150
A048JK	A06J A10J A11J A12J A15J A20J A21J	4.2 / 5.6 7.2 / 9.6 7.2 / 9.6 8.4 / 11.2 10.8 / 14.4 14.4 / 19.2 14.4 / 19.2	20.2 / 23.3 34.7 / 40.0 34.7 / 40.0 40.4 / 46.7 52.0 / 60.0 69.3 / 80.0 69.3 / 80.0	65 / 69 83 / 90 83 / 90 91 / 98 105 / 115 127 / 140 127 / 140	80 / 80 100 / 100 100 / 100 100 / 110 110 / 125 150 / 150 150 / 150
A060JK	A06J A10J A11J A12J A15J A20J A21J	4.2 / 5.6 7.2 / 9.6 7.2 / 9.6 8.4 / 11.2 10.8 / 14.4 14.4 / 19.2 14.4 / 19.2	20.2 / 23.3 34.7 / 40.0 34.7 / 40.0 40.4 / 46.7 52.0 / 60.0 69.3 / 80.0 69.3 / 80.0	77 / 81 96 / 102 96 /102 103 / 111 117 / 127 139 / 152 139 / 152	100 / 110 110 / 125 110 / 125 125 / 125 125 / 150 150 / 175 150 / 175

UNIT MODEL (10 SEER)	HEATER KIT MODEL NO.	HEATER KW @ 208/240*	HEATER KIT FLA	UNIT MIN. CKT. AMPACITY	MAX. FUSE OR CKT. BKR. SIZE (CKT. BKR. MUST BE HACR TYPE FOR USA)
A036CK	A06C A10C A11C A12C A15C A20C A21C	4.2 / 5.6 7.2 / 9.6 7.2 / 9.6 8.4 / 11.2 10.8 / 14.4 14.4 / 19.2 14.4 / 19.2	11.7 / 13.5 20.0 / 23.1 20.0 / 23.1 23.4 / 27.0 30.1 / 34.7 40.1 / 46.2 40.1 / 46.2	38 / 41 49 / 53 49 / 53 53 / 57 61 / 67 74 / 82 74 / 82	45 / 45 50 / 60 50 / 60 60 / 60 60 / 70 80 / 80 80 / 80
A042CK	A06C A10C A11C A12C A15C A20C A21C	4.2 / 5.6 7.2 / 9.6 7.2 / 9.6 8.4 / 11.2 10.8 / 14.4 14.4 / 19.2 14.4 / 19.2	11.7 / 13.5 20.0 / 23.1 20.0 / 23.1 23.4 / 27.0 30.1 / 34.7 40.1 / 46.2 40.1 / 46.2	41 / 43 51 / 55 51 / 55 55 / 60 64 / 70 76 / 84 76 / 84	50 / 50 60 / 60 60 / 60 60 / 60 70 / 70 80 / 90 80 / 90
A048CK	A06C A10C A11C A12C A15C A20C A21C	4.2 / 5.6 7.2 / 9.6 7.2 / 9.6 8.4 / 11.2 10.8 / 14.4 14.4 / 19.2 14.4 / 19.2	11.7 / 13.5 20.0 / 23.1 20.0 / 23.1 23.4 / 27.0 30.1 / 34.7 40.1 / 46.2 40.1 / 46.2	41 / 43 51 / 55 51 / 55 55 / 60 64 / 70 76 / 84 76 / 84	50 / 50 60 / 60 60 / 60 60 / 60 70 / 70 80 / 90 80 / 90
A060CK	A06C A10C A11C A12C A15C A20C A21C A24C	4.2 / 5.6 7.2 / 9.6 7.2 / 9.6 8.4 / 11.2 10.8 / 14.4 14.4 / 19.2 14.4 / 19.2 18.0 / 24.0	11.7 / 13.5 20.0 / 23.1 20.0 / 23.1 23.4 / 27.0 30.1 / 34.7 40.1 / 46.2 40.1 / 46.2 50.1 / 57.8	49 / 52 60 / 64 60 / 64 64 / 68 72 / 78 85 / 92 85 / 92 97 / 107	60 / 60 70 / 70 70 / 70 70 / 80 80 / 80 90 / 100 90 / 100 100 / 110

*Heater Kit KBTU/HR = KW x 3.413

AUXILIARY HEATER KITS CHARACTERISTICS AND APPLICATION – 10 SEER MODELS

UNIT MODEL (10 SEER)	HEATER KIT MODEL NO.	HEATER KW @ 480V	HEATER KIT FLA	UNIT MIN. CKT. AMPACITY	MAX. FUSE OR CKT. BKR. SIZE (CKT. BKR. MUST BE HACR TYPE FOR USA)
A036DK	NONE	—	—	13	15
	A06D	5.6	6.7	21	25
	A10D	9.6	11.6	27	30
	A11D	9.6	11.6	27	30
	A12D	11.2	13.5	29	30
	A15D	14.4	17.3	34	35
	A20D	19.2	23.1	41	45
	A21D	19.2	23.1	41	45
A042DK	NONE	—	—	14	20
	A06D	5.6	6.7	22	25
	A10D	9.6	11.6	28	30
	A11D	9.6	11.6	28	30
	A12D	11.2	13.5	31	35
	A15D	14.4	17.3	35	35
	A20D	19.2	23.1	43	45
	A21D	19.2	23.1	43	45
A048DK	NONE	—	—	14	20
	A06D	5.6	6.7	22	25
	A10D	9.6	11.6	28	30
	A11D	9.6	11.6	28	30
	A12D	11.2	13.5	31	35
	A15D	14.4	17.3	35	35
	A20D	19.2	23.1	43	45
	A21D	19.2	23.1	43	45
A060DK	NONE	—	—	18	25
	A06D	5.6	6.7	27	35
	A10D	9.6	11.6	33	40
	A11D	9.6	11.6	33	40
	A12D	11.2	13.5	35	40
	A15D	14.4	17.3	40	45
	A20D	19.2	23.1	47	50
	A21D	19.2	23.1	47	50
	A24D	24.0	28.9	54	60

AUXILIARY HEATER KITS CHARACTERISTICS AND APPLICATION – 10 SEER MODELS

UNIT MODEL (10 SEER)	HEATER KIT MODEL NO.	HEATER KW @ 208/240*	HEATER KIT FLA	UNIT MIN. CKT. AMPACITY	MAX. FUSE OR CKT. BKR. SIZE (CKT. BKR. MUST BE HACR TYPE FOR USA)
A036CL	A06C A10C A11C A12C A15C A20C A21C	4.2 / 5.6 7.2 / 9.6 7.2 / 9.6 8.4 / 11.2 10.8 / 14.4 14.4 / 19.2 14.4 / 19.2	11.7 / 13.5 20.0 / 23.1 20.0 / 23.1 23.4 / 27.0 30.1 / 34.7 40.1 / 46.2 40.1 / 46.2	37 / 40 48 / 52 48 / 52 52 / 56 60 / 66 73 / 81 73 / 81	45 / 45 50 / 60 50 / 60 60 / 60 60 / 70 80 / 90 80 / 90
A042CL	A06C A10C A11C A12C A15C A20C A21C	4.2 / 5.6 7.2 / 9.6 7.2 / 9.6 8.4 / 11.2 10.8 / 14.4 14.4 / 19.2 14.4 / 19.2	11.7 / 13.5 20.0 / 23.1 20.0 / 23.1 23.4 / 27.0 30.1 / 34.7 40.1 / 46.2 40.1 / 46.2	40 / 42 50 / 54 50 / 54 54 / 59 63 / 69 75 / 83 75 / 83	50 / 50 50 / 60 50 / 60 60 / 60 70 / 70 80 / 90 80 / 90
A048CL	A06C A10C A11C A12C A15C A20C A21C	4.2 / 5.6 7.2 / 9.6 7.2 / 9.6 8.4 / 11.2 10.8 / 14.4 14.4 / 19.2 14.4 / 19.2	11.7 / 13.5 20.0 / 23.1 20.0 / 23.1 23.4 / 27.0 30.1 / 34.7 40.1 / 46.2 40.1 / 46.2	40 / 42 50 / 54 50 / 54 54 / 59 63 / 69 75 / 83 75 / 83	50 / 50 50 / 60 50 / 60 60 / 60 70 / 70 80 / 90 80 / 90
A060CL	A06C A10C A11C A12C A15C A20C A21C A30C	4.2 / 5.6 7.2 / 9.6 7.2 / 9.6 8.4 / 11.2 10.8 / 14.4 14.4 / 19.2 14.4 / 19.2 21.6 / 28.8	11.7 / 13.5 20.0 / 23.1 20.0 / 23.1 23.4 / 27.0 30.1 / 34.7 40.1 / 46.2 40.1 / 46.2 60.1 / 69.4	48 / 51 59 / 63 59 / 63 63 / 67 71 / 77 84 / 92 84 / 92 109 / 120	60 / 60 70 / 70 70 / 70 70 / 80 80 / 80 90 / 100 90 / 100 110 / 125

UNIT MODEL (10 SEER)	HEATER KIT MODEL NO.	HEATER KW @ 208/240*	HEATER KIT FLA	UNIT MIN. CKT. AMPACITY	MAX. FUSE OR CKT. BKR. SIZE (CKT. BKR. MUST BE HACR TYPE FOR USA)
A036YL	A15Y A20Y A30Y	14.4 19.2 28.8	13.9 18.5 27.7	29 35 47	30 40 50
A042YL	A15Y A20Y A30Y	14.4 19.2 28.8	13.9 18.5 27.7	29 35 47	30 40 50
A048YL	A15Y A20Y A30Y	14.4 19.2 28.8	13.9 18.5 27.7	29 35 47	30 40 50
A060YL	A15Y A20Y A30Y	14.4 19.2 28.8	13.9 18.5 27.7	33 39 51	35 40 60

*Heater Kit KBTU/HR = KW x 3.413

AUXILIARY HEATER KITS CHARACTERISTICS AND APPLICATION – 10 SEER MODELS

UNIT MODEL (10 SEER)	HEATER KIT MODEL NO.	HEATER KW @ 208/240*	HEATER KIT FLA	UNIT MIN. CKT. AMPACITY	MAX. FUSE OR CKT. BKR. SIZE (CKT. BKR. MUST BE HACR TYPE FOR USA)
A036DL/DM	A06D	5.6	6.7	21	25
	A10D	9.6	11.6	27	30
	A11D	9.6	11.6	27	30
	A12D	11.2	13.5	29	30
	A15D	14.4	17.3	34	35
	A20D	19.2	23.1	41	45
	A21D	19.2	23.1	41	45
A042DL/DM	A06D	5.6	6.7	22	25
	A10D	9.6	11.6	28	30
	A11D	9.6	11.6	28	30
	A12D	11.2	13.5	30	30
	A15D	14.4	17.3	35	35
	A20D	19.2	23.1	42	45
	A21D	19.2	23.1	42	45
A048DL/DM	A06D	5.6	6.7	22	25
	A10D	9.6	11.6	28	30
	A11D	9.6	11.6	28	30
	A12D	11.2	13.5	30	30
	A15D	14.4	17.3	35	35
	A20D	19.2	23.1	42	45
	A21D	19.2	23.1	42	45
A060DL/DM	A06D	5.6	6.7	26	30
	A10D	9.6	11.6	32	35
	A11D	9.6	11.6	32	35
	A12D	11.2	13.5	34	40
	A15D	14.4	17.3	39	45
	A20D	19.2	23.1	46	50
	A21D	19.2	23.1	46	50
	A30D	28.8	34.7	53	60

UNIT MODEL (10 SEER)	HEATER KIT MODEL NO.	HEATER KW @ 208/240*	HEATER KIT FLA	UNIT MIN. CKT. AMPACITY	MAX. FUSE OR CKT. BKR. SIZE (CKT. BKR. MUST BE HACR TYPE FOR USA)
A036CM	A06C	4.2 / 5.6	11.7 / 13.5	38 / 41	45 / 45
	A10C	7.2 / 9.6	20.0 / 23.1	49 / 53	50 / 60
	A11C	7.2 / 9.6	20.0 / 23.1	49 / 53	50 / 60
	A12C	8.4 / 11.2	23.4 / 27.0	53 / 57	60 / 60
	A15C	10.8 / 14.4	30.1 / 34.7	61 / 67	70 / 70
	A20C	14.4 / 19.2	40.1 / 46.2	74 / 82	80 / 90
	A21C	14.4 / 19.2	40.1 / 46.2	74 / 82	80 / 90
A042CM	A06C	4.2 / 5.6	11.7 / 13.5	41 / 43	45 / 45
	A10C	7.2 / 9.6	20.0 / 23.1	51 / 55	60 / 60
	A11C	7.2 / 9.6	20.0 / 23.1	51 / 55	60 / 60
	A12C	8.4 / 11.2	23.4 / 27.0	55 / 60	60 / 60
	A15C	10.8 / 14.4	30.1 / 34.7	64 / 70	70 / 70
	A20C	14.4 / 19.2	40.1 / 46.2	76 / 84	80 / 90
	A21C	14.4 / 19.2	40.1 / 46.2	76 / 84	80 / 90
A048CM	A06C	4.2 / 5.6	11.7 / 13.5	41 / 43	45 / 45
	A10C	7.2 / 9.6	20.0 / 23.1	51 / 55	60 / 60
	A11C	7.2 / 9.6	20.0 / 23.1	51 / 55	60 / 60
	A12C	8.4 / 11.2	23.4 / 27.0	55 / 60	60 / 60
	A15C	10.8 / 14.4	30.1 / 34.7	64 / 70	70 / 70
	A20C	14.4 / 19.2	40.1 / 46.2	76 / 84	80 / 90
	A21C	14.4 / 19.2	40.1 / 46.2	76 / 84	80 / 90
A060CM	A06C	4.2 / 5.6	11.7 / 13.5	48 / 51	60 / 60
	A10C	7.2 / 9.6	20.0 / 23.1	59 / 63	70 / 70
	A11C	7.2 / 9.6	20.0 / 23.1	59 / 63	70 / 70
	A12C	8.4 / 11.2	23.4 / 27.0	63 / 67	70 / 80
	A15C	1 10.8 / 14.4	30.1 / 34.7	71 / 77	80 / 80
	A20C	1 14.4 / 19.2	40.1 / 46.2	84 / 92	90 / 100
	A21C	14.4 / 19.2	40.1 / 46.2	84 / 92	90 / 100
	A30C	21.6 / 28.8	60.1 / 69.4	109 / 120	110 / 125

*Heater Kit KBTU/HR = KW x 3.413

AUXILIARY HEATER KITS CHARACTERISTICS AND APPLICATION – 10 SEER MODELS

UNIT MODEL (10 SEER)	HEATER KIT MODEL NO.	HEATER KW @ 208/240*	HEATER KIT FLA	UNIT MIN. CKT. AMPACITY	MAX. FUSE OR CKT. BKR. SIZE (CKT. BKR. MUST BE HACR TYPE FOR USA)
A036DM	A06D	5.6	6.7	19	25
	A10D	9.6	11.6	24	30
	A11D	9.6	11.6	24	30
	A12D	11.2	13.5	26	30
	A15D	14.4	17.3	30	35
	A20D	19.2	23.1	36	40
	A21D	19.2	23.1	36	40
A042DM	A06D	5.6	6.7	20	25
	A10D	9.6	11.6	25	30
	A11D	9.6	11.6	25	30
	A12D	11.2	13.5	27	30
	A15D	14.4	17.3	31	35
	A20D	19.2	23.1	37	40
	A21D	19.2	23.1	37	40
A048DM	A06D	5.6	6.7	20	25
	A10D	9.6	11.6	25	30
	A11D	9.6	11.6	25	30
	A12D	11.2	13.5	27	30
	A15D	14.4	17.3	31	35
	A20D	19.2	23.1	37	40
	A21D	19.2	23.1	37	40
A060DM	A06D	5.6	6.7	24	30
	A10D	9.6	11.6	29	35
	A11D	9.6	11.6	29	35
	A12D	11.2	13.5	31	40
	A15D	14.4	17.3	35	45
	A20D	19.2	23.1	41	50
	A21D	19.2	23.1	41	50
	A30D	28.8	34.7	53	60

UNIT MODEL (10 SEER)	HEATER KIT MODEL NO.	HEATER KW @ 208/240*	HEATER KIT FLA	UNIT MIN. CKT. AMPACITY	MAX. FUSE OR CKT. BKR. SIZE (CKT. BKR. MUST BE HACR TYPE FOR USA)
A036YM	A15Y	14.4	13.9	29	30
	A20Y	19.2	18.5	35	40
	A30Y	28.8	27.7	47	50
A042YM	A15Y	14.4	13.9	29	30
	A20Y	19.2	18.5	35	40
	A30Y	28.8	27.7	47	50
A048YM	A15Y	14.4	13.9	29	30
	A20Y	19.2	18.5	35	40
	A30Y	28.8	27.7	47	50
A060YM	A15Y	14.4	13.9	33	35
	A20Y	19.2	18.5	39	40
	A30Y	28.8	27.7	51	60

*Heater Kit KBTU/HR = KW x 3.413

AUXILIARY HEATER KITS CHARACTERISTICS AND APPLICATION – 12 SEER MODELS

UNIT MODEL (12 SEER)	HEATER KIT MODEL NO.	HEATER KW @ 208/240*	HEATER KIT FLA	UNIT MIN. CKT. AMPACITY	MAX. FUSE OR CKT. BKR. SIZE (CKT. BKR. MUST BE HACR TYPE FOR USA)
A036JK	A06J	4.2 / 5.6	20.2 / 23.3	58 / 62	70 / 70
	A10J	7.2 / 9.6	34.7 / 40.0	76 / 82	80 / 90
	A11J	7.2 / 9.6	34.7 / 40.0	76 / 82	80 / 90
	A12J	8.4 / 11.2	40.4 / 46.7	83 / 91	90 / 100
	A15J	10.8 / 14.4	52.0 / 60.0	97 / 107	100 / 110
	A20J	14.4 / 19.2	69.3 / 80.0	119 / 132	125 / 150
	A21J	14.4 / 19.2	69.3 / 80.0	119 / 132	125 / 150
A042JK	A06J	4.2 / 5.6	20.2 / 23.3	58 / 62	70 / 70
	A10J	7.2 / 9.6	34.7 / 40.0	76 / 82	80 / 90
	A11J	7.2 / 9.6	34.7 / 40.0	76 / 82	80 / 90
	A12J	8.4 / 11.2	40.4 / 46.7	83 / 91	90 / 100
	A15J	10.8 / 14.4	52.0 / 60.0	97 / 107	100 / 110
	A20J	14.4 / 19.2	69.3 / 80.0	119 / 132	125 / 150
	A21J	14.4 / 19.2	69.3 / 80.0	119 / 132	125 / 150
A048JK	A06J	4.2 / 5.6	20.2 / 23.3	69 / 73	90 / 90
	A10J	7.2 / 9.6	34.7 / 40.0	87 / 94	100 / 110
	A11J	7.2 / 9.6	34.7 / 40.0	87 / 94	100 / 110
	A12J	8.4 / 11.2	40.4 / 46.7	94 / 102	110 / 110
	A15J	10.8 / 14.4	52.0 / 60.0	109 / 119	110 / 125
	A20J	14.4 / 19.2	69.3 / 80.0	130 / 144	150 / 150
	A21J	14.4 / 19.2	69.3 / 80.0	130 / 144	150 / 150
A060JL	A06J	4.2 / 5.6	20.2 / 23.3	74 / 78	100 / 100
	A10J	7.2 / 9.6	34.7 / 40.0	92 / 99	110 / 110
	A11J	7.2 / 9.6	34.7 / 40.0	92 / 99	110 / 110
	A12J	8.4 / 11.2	40.4 / 46.7	99 / 107	110 / 125
	A15J	10.8 / 14.4	52.0 / 60.0	114 / 124	125 / 125
	A20J	14.4 / 19.2	69.3 / 80.0	135 / 149	150 / 150
	A21J	14.4 / 19.2	69.3 / 80.0	135 / 149	150 / 150

UNIT MODEL (12 SEER)	HEATER KIT MODEL NO.	HEATER KW @ 208/240	HEATER KIT FLA	UNIT MIN. CKT. AMPACITY	MAX. FUSE OR CKT. BKR. SIZE (CKT. BKR. MUST BE HACR TYPE FOR USA)
A036CK	A06C	4.2 / 5.6	11.7 / 13.5	37 / 39	45 / 45
	A10C	7.2 / 9.6	20.0 / 23.1	48 / 51	50 / 60
	A11C	7.2 / 9.6	20.0 / 23.1	48 / 51	50 / 60
	A12C	8.4 / 11.2	23.4 / 27.0	52 / 56	60 / 60
	A15C	10.8 / 14.4	30.1 / 34.7	60 / 66	60 / 70
	A20C	14.4 / 19.2	40.1 / 46.2	73 / 80	80 / 80
	A21C	14.4 / 19.2	40.1 / 46.2	73 / 80	80 / 80
A042CK	A06C	4.2 / 5.6	11.7 / 13.5	38 / 41	45 / 45
	A10C	7.2 / 9.6	20.0 / 23.1	49 / 53	50 / 60
	A11C	7.2 / 9.6	20.0 / 23.1	49 / 53	50 / 60
	A12C	8.4 / 11.2	23.4 / 27.0	53 / 57	60 / 60
	A15C	10.8 / 14.4	30.1 / 34.7	61 / 67	70 / 70
	A20C	14.4 / 19.2	40.1 / 46.2	74 / 82	80 / 90
	A21C	14.4 / 19.2	40.1 / 46.2	74 / 82	80 / 90
A048CK	A06C	4.2 / 5.6	11.7 / 13.5	43 / 46	50 / 60
	A10C	7.2 / 9.6	20.0 / 23.1	54 / 58	60 / 60
	A11C	7.2 / 9.6	20.0 / 23.1	54 / 58	60 / 60
	A12C	8.4 / 11.2	23.4 / 27.0	58 / 62	60 / 70
	A15C	10.8 / 14.4	30.1 / 34.7	66 / 72	70 / 80
	A20C	14.4 / 19.2	40.1 / 46.2	79 / 87	80 / 90
	A21C	14.4 / 19.2	40.1 / 46.2	79 / 87	80 / 90

*Heater Kit KBTU/HR = KW x 3.413

AUXILIARY HEATER KITS CHARACTERISTICS AND APPLICATION – 12 SEER MODELS

UNIT MODEL (12 SEER)	HEATER KIT MODEL NO.	HEATER KW @ 480V	HEATER KIT FLA	UNIT MIN. CKT. AMPACITY	MAX. FUSE OR CKT. BKR. SIZE (CKT. BKR. MUST BE HACR TYPE FOR USA)
A036DK	A06D	5.6	6.7	21	25
	A10D	9.6	11.6	27	30
	A11D	9.6	11.6	27	30
	A12D	11.2	13.5	29	30
	A15D	14.4	17.3	34	35
	A20D	19.2	23.1	41	45
	A21D	19.2	23.1	41	45
A042DK	A06D	5.6	6.7	22	25
	A10D	9.6	11.6	28	30
	A11D	9.6	11.6	28	30
	A12D	11.2	13.5	31	35
	A15D	14.4	17.3	35	35
	A20D	19.2	23.1	43	45
	A21D	19.2	23.1	43	45
A048DK	A06D	5.6	6.7	22	25
	A10D	9.6	11.6	28	30
	A11D	0/7	11/7	29	30
	A12D	11.2	13.5	31	35
	A15D	14.4	17.3	35	35
	A20D	19.2	23.1	43	45
	A21D	19.2	23.1	43	45
A060DK	A06D	5.6	6.7	27	35
	A10D	9.6	11.6	33	40
	A11D	9.6	11.6	33	40
	A12D	11.2	13.5	35	40
	A15D	14.4	17.3	40	45
	A20D	19.2	23.1	47	50
	A21D	19.2	23.1	47	50
	A24D	24.0	28.9	54	60

AUXILIARY HEATER KITS CHARACTERISTICS AND APPLICATION – 12 SEER MODELS

UNIT MODEL (12 SEER)	HEATER KIT MODEL NO.	HEATER KW @ 208/240*	HEATER KIT FLA	UNIT MIN. CKT. AMPACITY	MAX. FUSE OR CKT. BKR. SIZE (CKT. BKR. MUST BE HACR TYPE FOR USA)
A036CL	A06C	4.2 / 5.6	11.7 / 13.5	37 / 39	45 / 45
	A10C	7.2 / 9.6	20.0 / 23.1	48 / 51	50 / 60
	A11C	7.2 / 9.6	20.0 / 23.1	48 / 51	50 / 60
	A12C	8.4 / 11.2	23.4 / 27.0	52 / 56	60 / 60
	A15C	10.8 / 14.4	30.1 / 34.7	60 / 66	60 / 70
	A20C	14.4 / 19.2	40.1 / 46.2	73 / 80	80 / 80
	A21C	14.4 / 19.2	40.1 / 46.2	73 / 80	80 / 80
A042CL	A06C	4.2 / 5.6	11.7 / 13.5	37 / 40	50 / 50
	A10C	7.2 / 9.6	20.0 / 23.1	48 / 52	60 / 60
	A11C	7.2 / 9.6	20.0 / 23.1	48 / 52	60 / 60
	A12C	8.4 / 11.2	23.4 / 27.0	52 / 56	60 / 60
	A15C	10.8 / 14.4	30.1 / 34.7	60 / 66	60 / 70
	A20C	14.4 / 19.2	40.1 / 46.2	73 / 81	80 / 90
	A21C	14.4 / 19.2	40.1 / 46.2	73 / 81	80 / 90
A048CL	A06C	4.2 / 5.6	11.7 / 13.5	42 / 45	50 / 50
	A10C	7.2 / 9.6	20.0 / 23.1	53 / 57	60 / 60
	A11C	7.2 / 9.6	20.0 / 23.1	53 / 57	60 / 60
	A12C	8.4 / 11.2	23.4 / 27.0	57 / 61	60 / 70
	A15C	10.8 / 14.4	30.1 / 34.7	65 / 71	70 / 80
	A20C	14.4 / 19.2	40.1 / 46.2	78 / 86	80 / 90
	A21C	14.4 / 19.2	40.1 / 46.2	78 / 86	80 / 90
A060CL	A06C	4.2 / 5.6	11.7 / 13.5	47 / 49	60 / 60
	A10C	7.2 / 9.6	20.0 / 23.1	58 / 61	70 / 70
	A11C	7.2 / 9.6	20.0 / 23.1	58 / 61	70 / 70
	A12C	8.4 / 11.2	23.4 / 27.0	62 / 66	70 / 70
	A15C	10.8 / 14.4	30.1 / 34.7	70.76	80 / 80
	A20C	14.4 / 19.2	40.1 / 46.2	83 / 90	90 / 90
	A21C	14.4 / 19.2	40.1 / 46.2	83 / 90	90 / 90
	A30C	21.6 / 28.8	60.1 / 69.4	108 / 119	110 / 125

UNIT MODEL (12 SEER)	HEATER KIT MODEL NO.	HEATER KW @ 208/240*	HEATER KIT FLA	UNIT MIN. CKT. AMPACITY	MAX. FUSE OR CKT. BKR. SIZE (CKT. BKR. MUST BE HACR TYPE FOR USA)
A036DL/DM	A06D	5.6	6.7	21	25
	A10D	9.6	11.6	27	30
	A11D	9.6	11.6	27	30
	A12D	11.2	13.5	29	30
	A15D	14.4	17.3	34	35
	A20D	19.2	23.1	41	45
	A21D	19.2	23.1	41	45
A042DL/DM	A06D	5.6	6.7	22	25
	A10D	9.6	11.6	28	30
	A11D	9.6	11.6	28	30
	A12D	11.2	13.5	30	30
	A15D	14.4	17.3	35	35
	A20D	19.2	23.1	42	45
	A21D	19.2	23.1	42	45
A048DL/DM	A06D	5.6	6.7	22	25
	A10D	9.6	11.6	28	30
	A11D	9.6	11.6	28	30
	A12D	11.2	13.5	30	30
	A15D	14.4	17.3	35	35
	A20D	19.2	23.1	42	45
	A21D	19.2	23.1	42	45
A060DL/DM	A06D	5.6	6.7	26	30
	A10D	9.6	11.6	32	35
	A11D	9.6	11.6	32	35
	A12D	11.2	13.5	34	40
	A15D	14.4	17.3	39	45
	A20D	19.2	23.1	46	50
	A21D	19.2	23.1	46	50
	A30D	28.8	34.7	53	60

*Heater Kit KBTU/HR = KW x 3.413

AUXILIARY HEATER KITS CHARACTERISTICS AND APPLICATION – 12 SEER MODELS

UNIT MODEL (12 SEER)	HEATER KIT MODEL NO.	HEATER KW @ 208/240*	HEATER KIT FLA	UNIT MIN. CKT. AMPACITY	MAX. FUSE OR CKT. BKR. SIZE (CKT. BKR. MUST BE HACR TYPE FOR USA)
A036YL	A15Y A20Y A30Y	14.4 19.2 28.8	13.9 18.5 27.7	29 35 47	30 40 50
A042YL	A15Y A20Y A30Y	14.4 19.2 28.8	13.9 18.5 27.7	29 35 47	30 40 50
A048YL	A15Y A20Y A30Y	14.4 19.2 28.8	13.9 18.5 27.7	31 37 49	35 40 50
A060YL	A15Y A20Y A30Y	14.4 19.2 28.8	13.9 18.5 27.7	31 37 49	35 40 50

UNIT MODEL (12 SEER)	HEATER KIT MODEL NO.	HEATER KW @ 208/240*	HEATER KIT FLA	UNIT MIN. CKT. AMPACITY	MAX. FUSE OR CKT. BKR. SIZE (CKT. BKR. MUST BE HACR TYPE FOR USA)
A036CM	A06C A10C A11C A12C A15C A20C A21C	4.2 / 5.6 7.2 / 9.6 7.2 / 9.6 8.4 / 11.2 10.8 / 14.4 14.4 / 19.2 14.4 / 19.2	11.7 / 13.5 20.0 / 23.1 20.0 / 23.1 23.4 / 27.0 30.1 / 34.7 40.1 / 46.2 40.1 / 46.2	37 / 39 48 / 51 48 / 51 52 / 56 60 / 66 73 / 80 73 / 80	45 / 45 50 / 60 50 / 60 60 / 60 60 / 70 80 / 80 80 / 80
A042CM	A06C A10C A11C A12C A15C A20C A21C	4.2 / 5.6 7.2 / 9.6 7.2 / 9.6 8.4 / 11.2 10.8 / 14.4 14.4 / 19.2 14.4 / 19.2	11.7 / 13.5 20.0 / 23.1 20.0 / 23.1 23.4 / 27.0 30.1 / 34.7 40.1 / 46.2 40.1 / 46.2	38 / 41 49 / 53 49 / 53 53 / 57 61 / 67 74 / 82 74 / 82	45 / 45 50 / 60 50 / 60 60 / 60 70 / 70 80 / 90 80 / 90
A048CM	A06C A10C A11C A12C A15C A20C A21C	4.2 / 5.6 7.2 / 9.6 7.2 / 9.6 8.4 / 11.2 10.8 / 14.4 14.4 / 19.2 14.4 / 19.2	11.7 / 13.5 20.0 / 23.1 20.0 / 23.1 23.4 / 27.0 30.1 / 34.7 40.1 / 46.2 40.1 / 46.2	43 / 46 54 / 58 54 / 58 58 / 62 66 / 72 79 / 87 79 / 87	50 / 50 60 / 60 60 / 60 60 / 70 70 / 80 80 / 90 80 / 90
A060CM	A06C A10C A11C A12C A15C A20C A21C A30C	4.2 / 5.6 7.2 / 9.6 7.2 / 9.6 8.4 / 11.2 1 10.8 / 14.4 1 14.4 / 19.2 14.4 / 19.2 21.6 / 28.8	11.7 / 13.5 20.0 / 23.1 20.0 / 23.1 23.4 / 27.0 30.1 / 34.7 40.1 / 46.2 40.1 / 46.2 60.1 / 69.4	47 / 49 58 / 61 58 / 61 62 / 66 70 / 76 83 / 90 83 / 90 108 / 119	60 / 60 70 / 70 70 / 70 70 / 70 80 / 80 90 / 90 90 / 90 110 / 125

*Heater Kit KBTU/HR = KW x 3.413

AUXILIARY HEATER KITS CHARACTERISTICS AND APPLICATION – 12 SEER MODELS

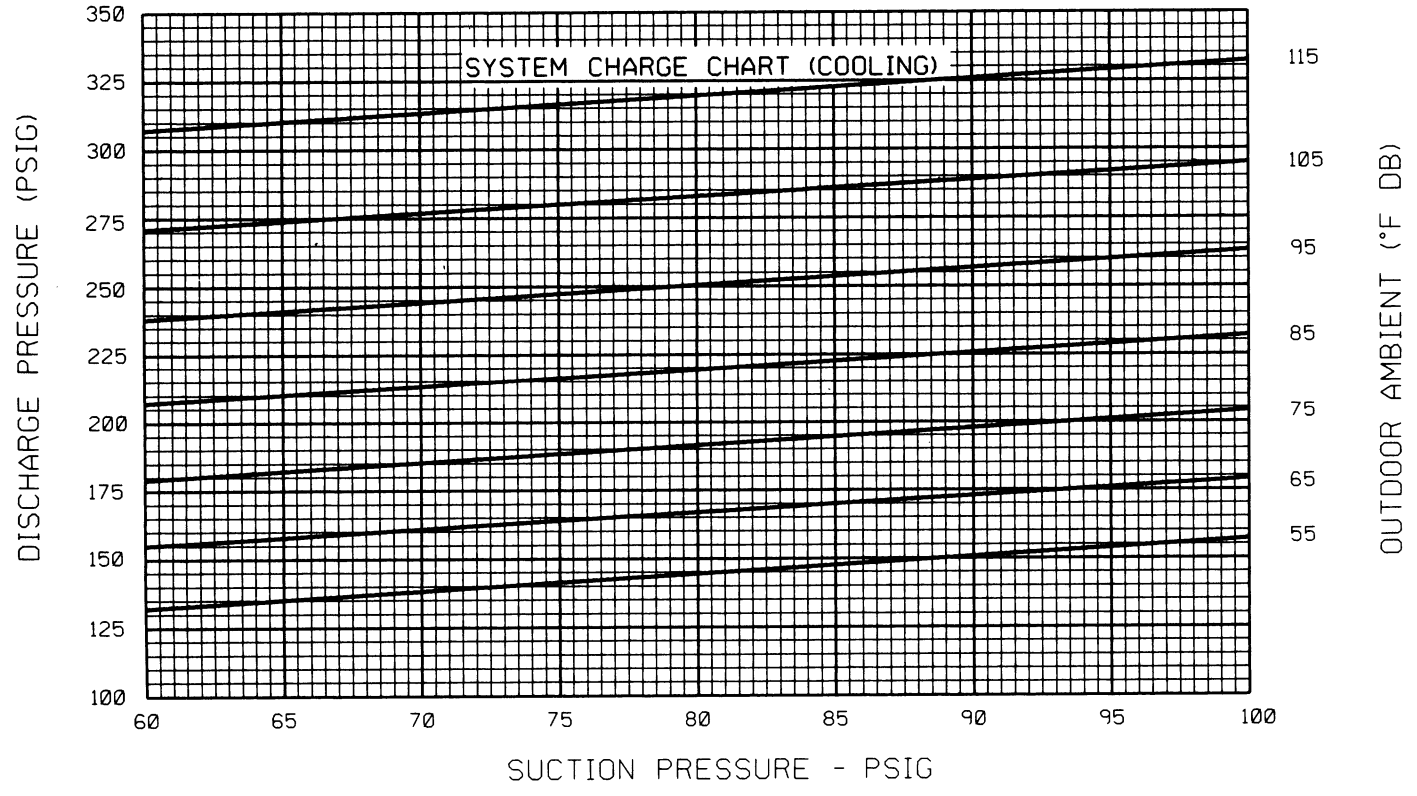
UNIT MODEL (12 SEER)	HEATER KIT MODEL NO.	HEATER KW @ 208/240*	HEATER KIT FLA	UNIT MIN. CKT. AMPACITY	MAX. FUSE OR CKT. BKR. SIZE (CKT. BKR. MUST BE HACR TYPE FOR USA)
A036DM	A06D	5.6	6.7	19	25
	A10D	9.6	11.6	24	30
	A11D	9.6	11.6	24	30
	A12D	11.2	13.5	26	30
	A15D	14.4	17.3	30	35
	A20D	19.2	23.1	36	40
	A21D	19.2	23.1	36	40
A042DM	A06D	5.6	6.7	19	25
	A10D	9.6	11.6	24	30
	A11D	9.6	11.6	24	30
	A12D	11.2	13.5	26	30
	A15D	14.4	17.3	30	35
	A20D	19.2	23.1	36	40
	A21D	19.2	23.1	36	40
A048DM	A06D	5.6	6.7	22	25
	A10D	9.6	11.6	27	30
	A11D	9.6	11.6	27	30
	A12D	11.2	13.5	29	35
	A15D	14.4	17.3	33	40
	A20D	19.2	23.1	39	45
	A21D	19.2	23.1	39	45
A060DM	A06D	5.6	6.7	24	30
	A10D	9.6	11.6	29	35
	A11D	9.6	11.6	29	35
	A12D	11.2	13.5	31	40
	A15D	14.4	17.3	35	45
	A20D	19.2	23.1	41	50
	A21D	19.2	23.1	41	50
	A30D	28.8	34.7	53	60

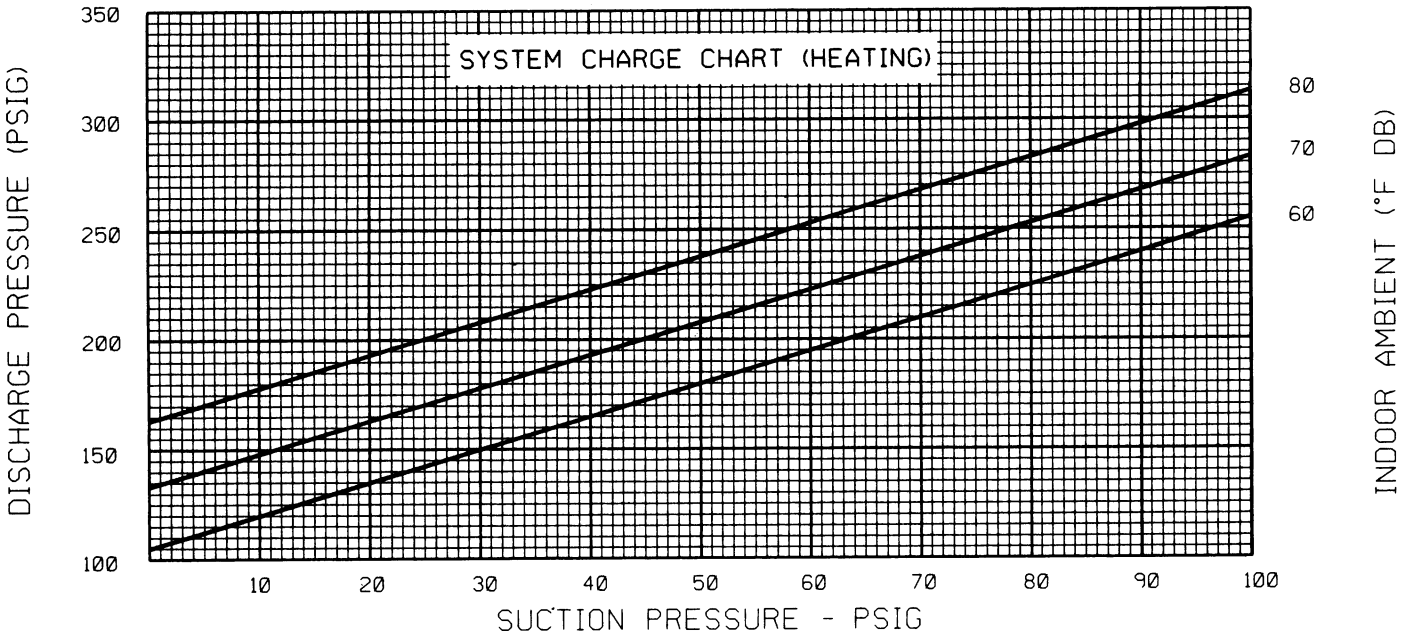
UNIT MODEL (12 SEER)	HEATER KIT MODEL NO.	HEATER KW @ 208/240*	HEATER KIT FLA	UNIT MIN. CKT. AMPACITY	MAX. FUSE OR CKT. BKR. SIZE (CKT. BKR. MUST BE HACR TYPE FOR USA)
A036YM	A15Y	14.4	13.9	29	30
	A20Y	19.2	18.5	35	40
	A30Y	28.8	27.7	47	50
A042YM	A15Y	14.4	13.9	28	30
	A20Y	19.2	18.5	34	40
	A30Y	28.8	27.7	46	50
A048YM	A15Y	14.4	13.9	30	30
	A20Y	19.2	18.5	36	40
	A30Y	28.8	27.7	48	50
A060YM	A15Y	14.4	13.9	31	35
	A20Y	19.2	18.5	37	40
	A30Y	28.8	27.7	49	50

*Heater Kit KBTU/HR = KW x 3.413

XX. MISCELLANEOUS

3 TON HEAT PUMP (10 SEER)



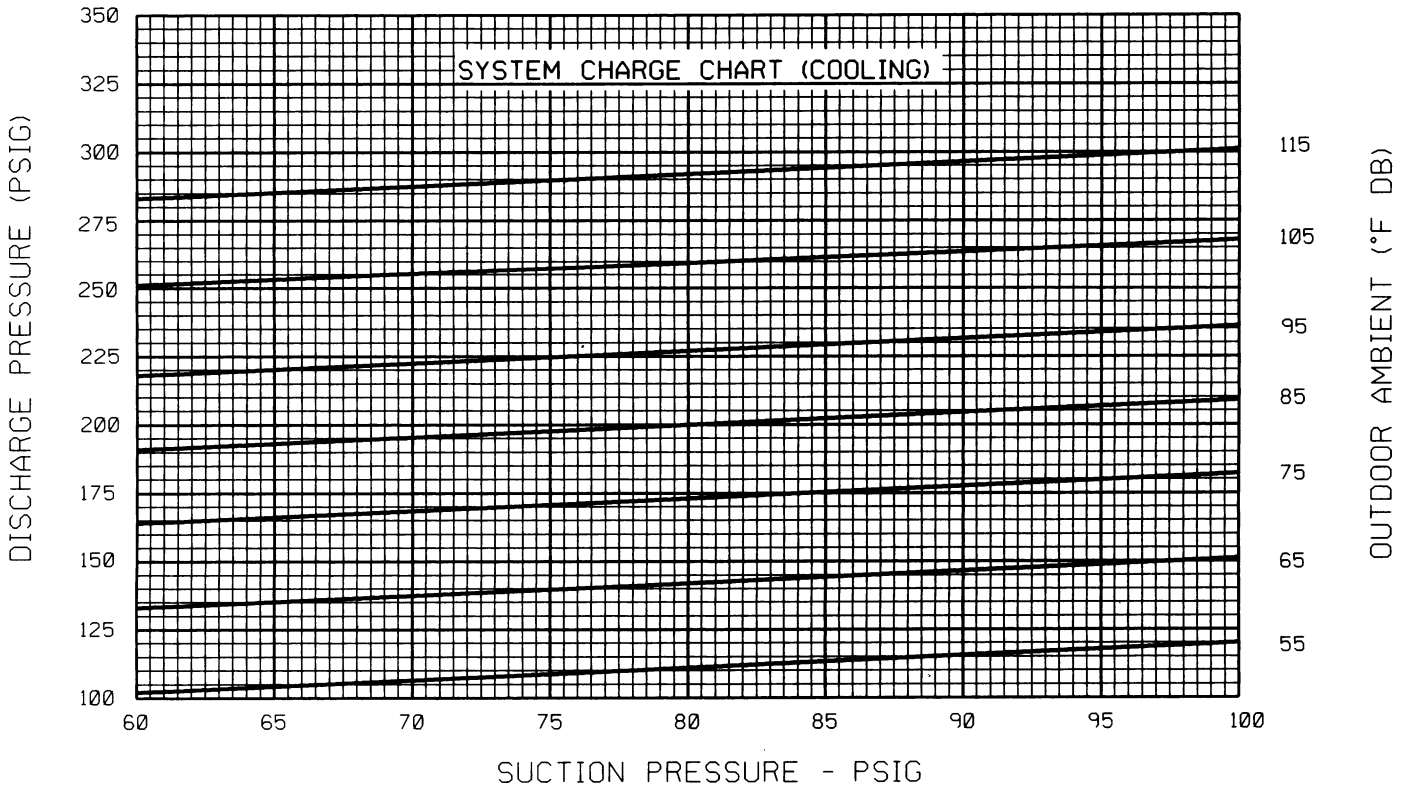


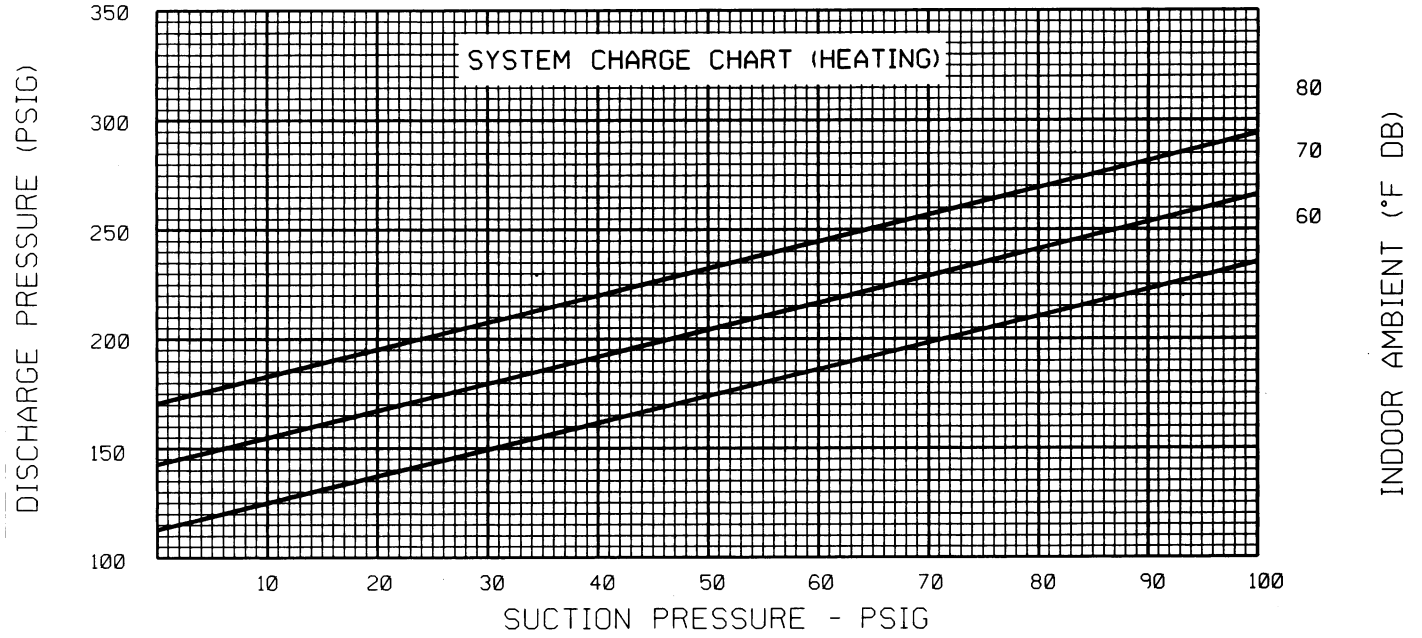
CAUTION: BEFORE FINAL REFRIGERANT CHECK, INDOOR RETURN AIR TEMPERATURE MUST BE BETWEEN 72°F & 76°F DB AT 50% R.H. (HEATING AND COOLING), AND NO ICE ON OUTDOOR COILS (HEATING).

INSTRUCTIONS:

1. CONNECT PRESSURE GAUGES TO SUCTION AND DISCHARGE PORTS ON UNIT.
2. MEASURE AIR TEMPERATURE TO: (a) OUTDOOR COIL FOR COOLING, (b) INDOOR COIL FOR HEATING.
3. PLACE AN "X" ON THE APPROPRIATE CHART WHERE THE SUCTION AND DISCHARGE PRESSURES CROSS.
4. IF "X" IS BELOW AMBIENT TEMPERATURE LINE, ADD CHARGE AND REPEAT STEP 3.
5. IF "X" IS ABOVE AMBIENT TEMPERATURE LINE, RECOVER EXCESS CHARGE AND REPEAT STEP 3. 92-23557-10-00

3 TON HEAT PUMP (12 SEER)



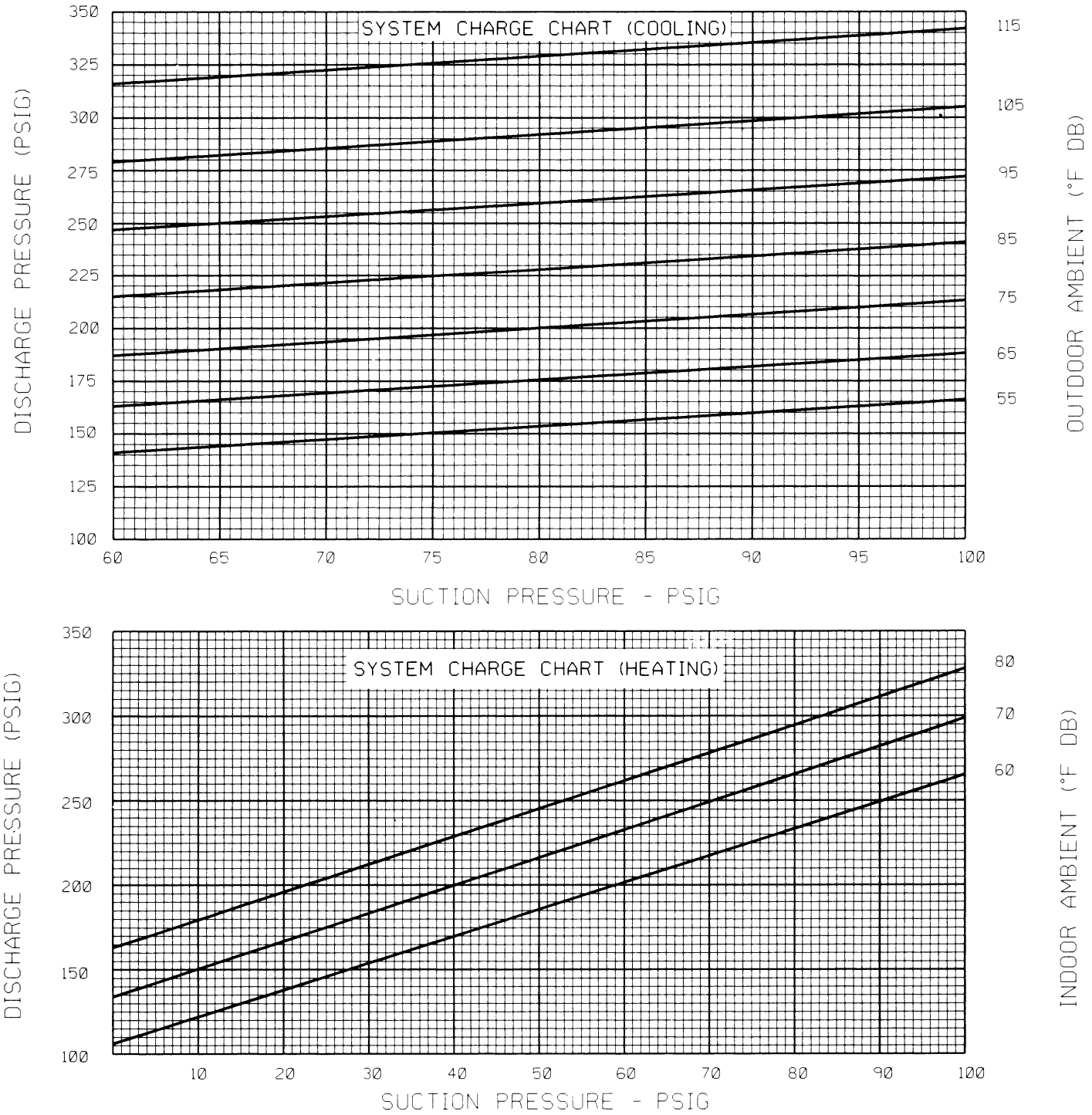


CAUTION: BEFORE FINAL REFRIGERANT CHECK, INDOOR RETURN AIR TEMPERATURE MUST BE BETWEEN 72°F & 76°F DB AT 50% R.H. (HEATING AND COOLING), AND NO ICE ON OUTDOOR COILS (HEATING).

INSTRUCTIONS:

1. CONNECT PRESSURE GAUGES TO SUCTION AND DISCHARGE PORTS ON UNIT.
2. MEASURE AIR TEMPERATURE TO: (a) OUTDOOR COIL FOR COOLING, (b) INDOOR COIL FOR HEATING.
3. PLACE AN "X" ON THE APPROPRIATE CHART WHERE THE SUCTION AND DISCHARGE PRESSURES CROSS.
4. IF "X" IS BELOW AMBIENT TEMPERATURE LINE, ADD CHARGE AND REPEAT STEP 3.
5. IF "X" IS ABOVE AMBIENT TEMPERATURE LINE, RECOVER EXCESS CHARGE AND REPEAT STEP 3. 92-23557-11-00

3½ TON HEAT PUMP (10 SEER)

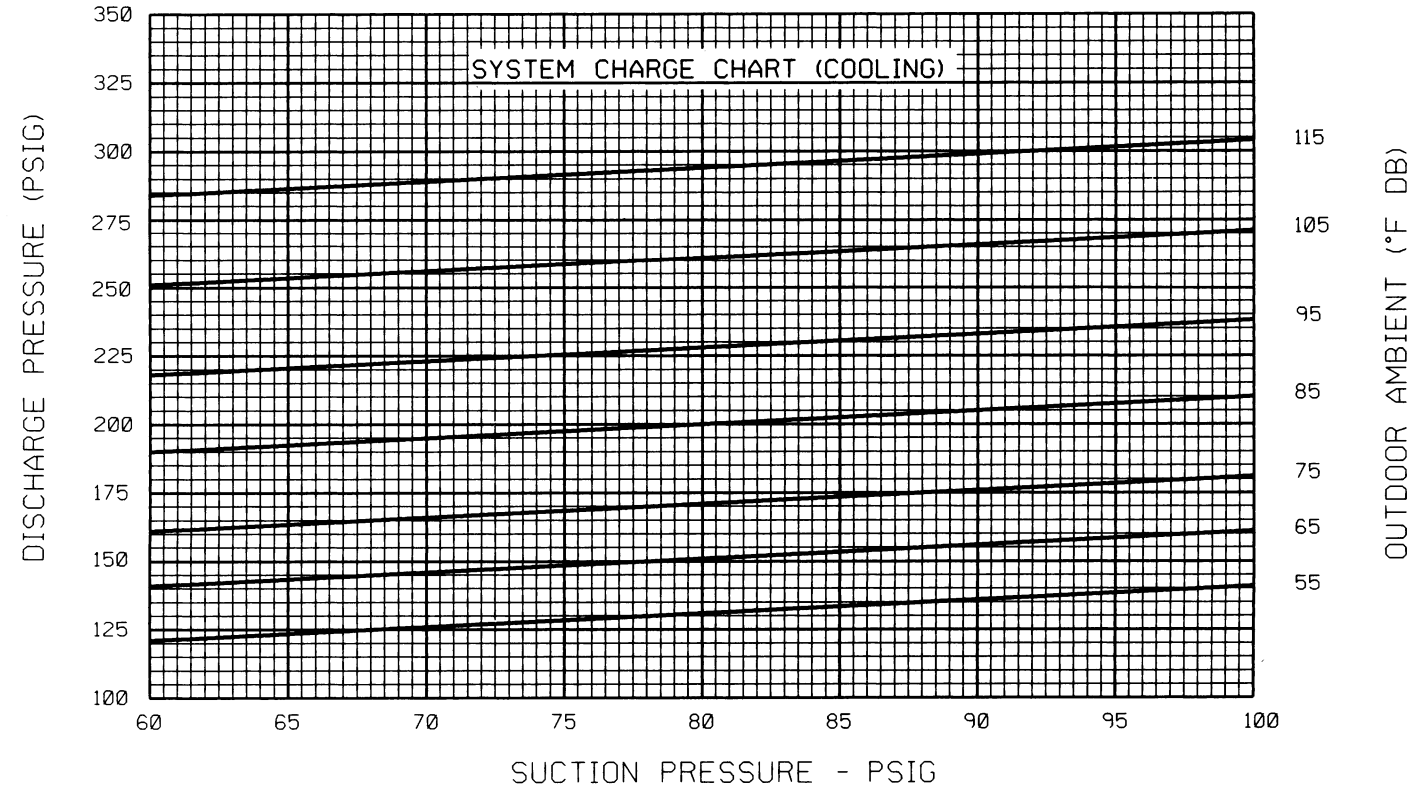


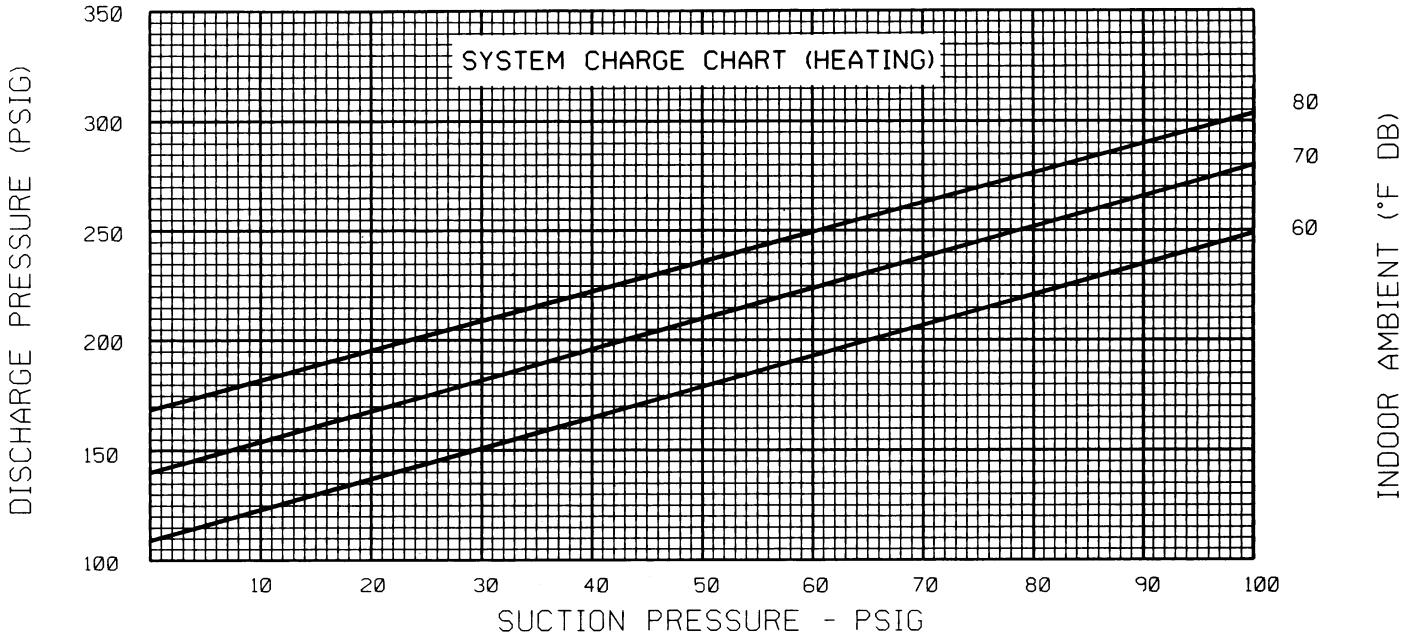
CAUTION: BEFORE FINAL REFRIGERANT CHECK, INDOOR RETURN AIR TEMPERATURE MUST BE BETWEEN 72°F & 76°F DB AT 50% R.H. (HEATING AND COOLING), AND NO ICE ON OUTDOOR COILS (HEATING).

INSTRUCTIONS:

1. CONNECT PRESSURE GAUGES TO SUCTION AND DISCHARGE PORTS ON UNIT.
2. MEASURE AIR TEMPERATURE TO: (a) OUTDOOR COIL FOR COOLING, (b) INDOOR COIL FOR HEATING.
3. PLACE AN "X" ON THE APPROPRIATE CHART WHERE THE SUCTION AND DISCHARGE PRESSURES CROSS.
4. IF "X" IS BELOW AMBIENT TEMPERATURE LINE, ADD CHARGE AND REPEAT STEP 3.
5. IF "X" IS ABOVE AMBIENT TEMPERATURE LINE, RECOVER EXCESS CHARGE AND REPEAT STEP 3. 92-23557-12-00

3½ TON HEAT PUMP (12 SEER)



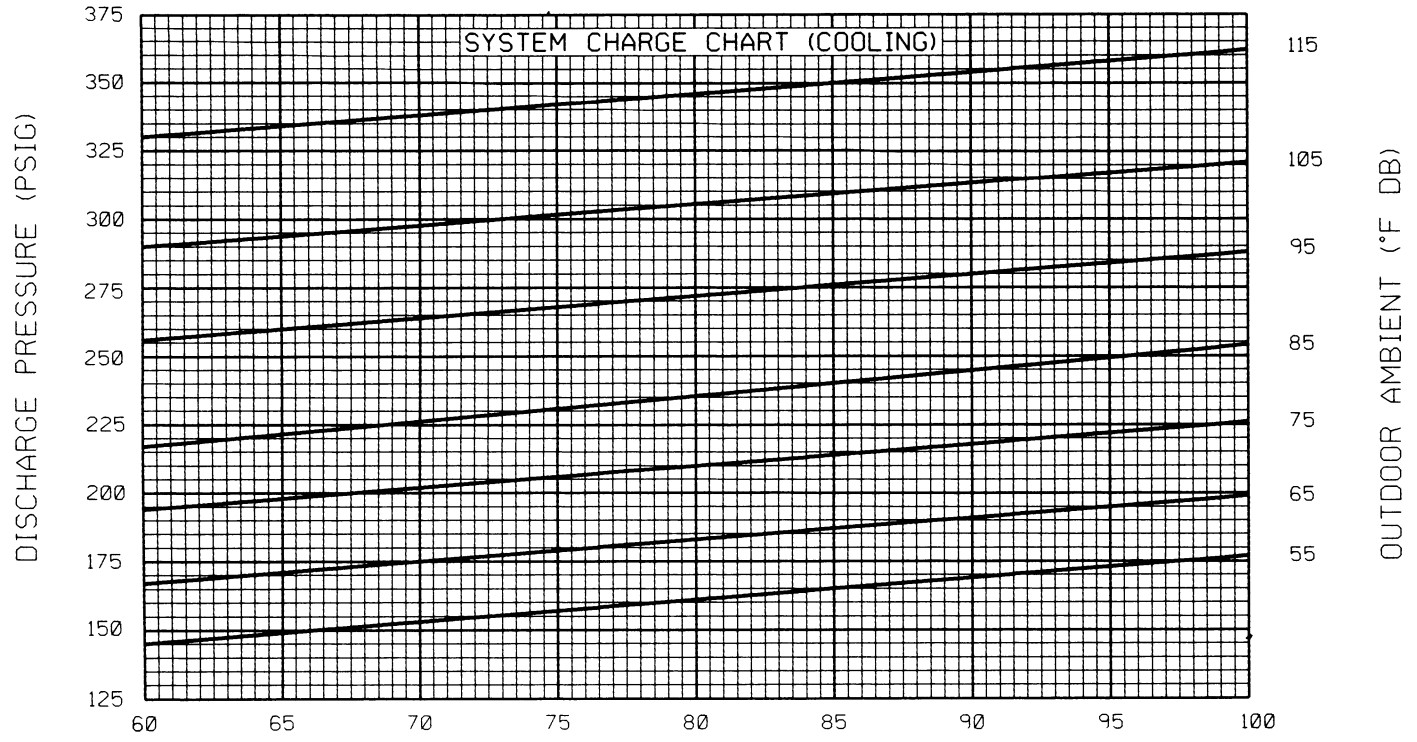


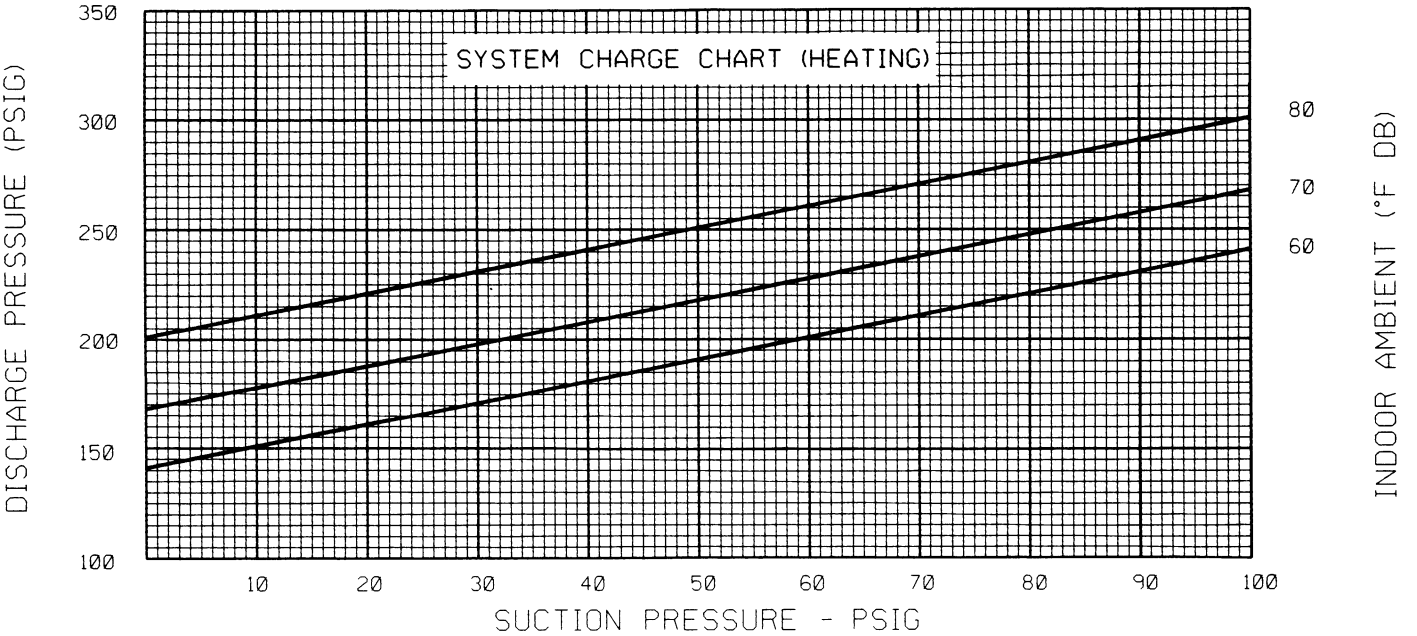
CAUTION: BEFORE FINAL REFRIGERANT CHECK, INDOOR RETURN AIR TEMPERATURE MUST BE BETWEEN 72°F & 76°F DB AT 50% R.H. (HEATING AND COOLING), AND NO ICE ON OUTDOOR COILS (HEATING).

INSTRUCTIONS:

1. CONNECT PRESSURE GAUGES TO SUCTION AND DISCHARGE PORTS ON UNIT.
2. MEASURE AIR TEMPERATURE TO: (a) OUTDOOR COIL FOR COOLING, (b) INDOOR COIL FOR HEATING.
3. PLACE AN "X" ON THE APPROPRIATE CHART WHERE THE SUCTION AND DISCHARGE PRESSURES CROSS.
4. IF "X" IS BELOW AMBIENT TEMPERATURE LINE, ADD CHARGE AND REPEAT STEP 3.
5. IF "X" IS ABOVE AMBIENT TEMPERATURE LINE, RECOVER EXCESS CHARGE AND REPEAT STEP 3. 92-23557-13-00

4 TON HEAT PUMP (10 SEER)



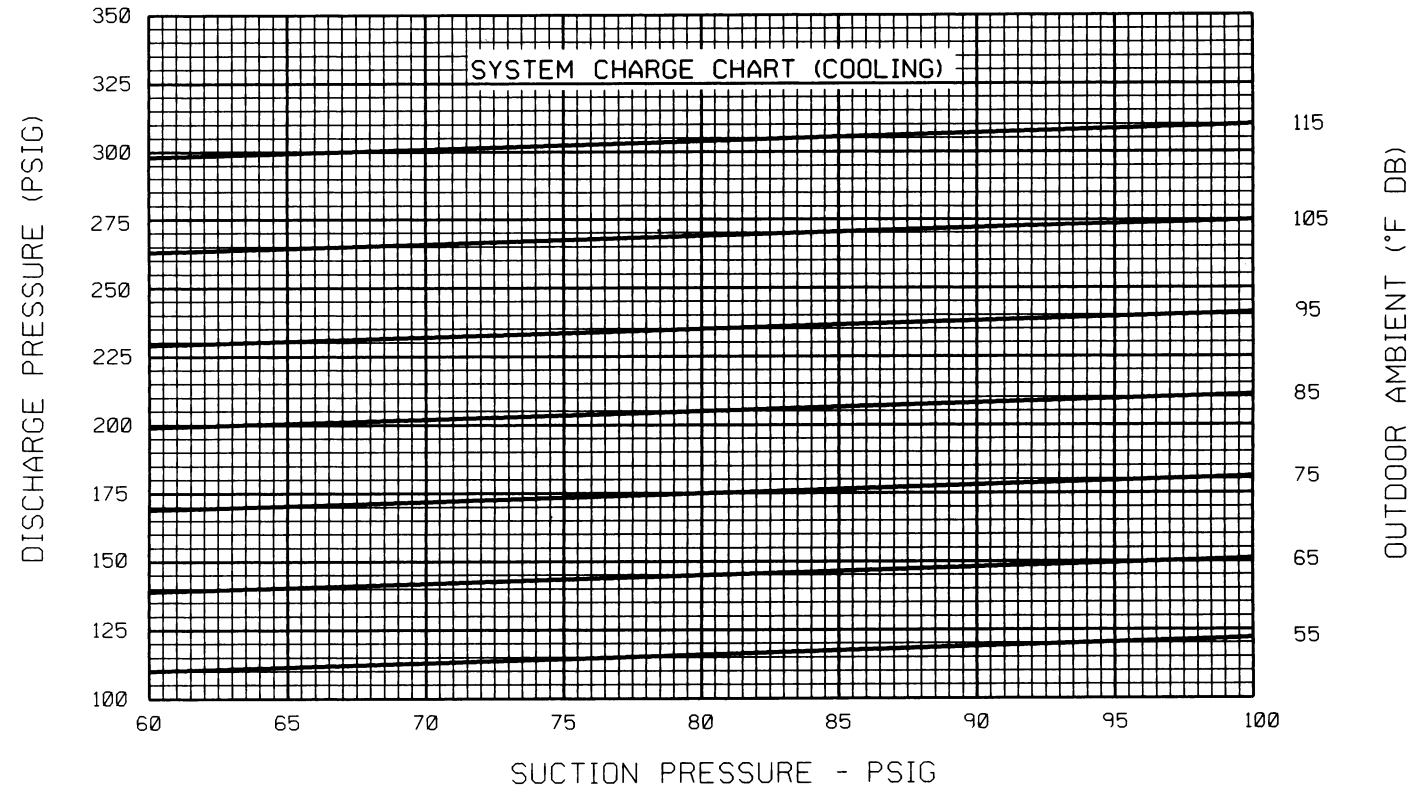


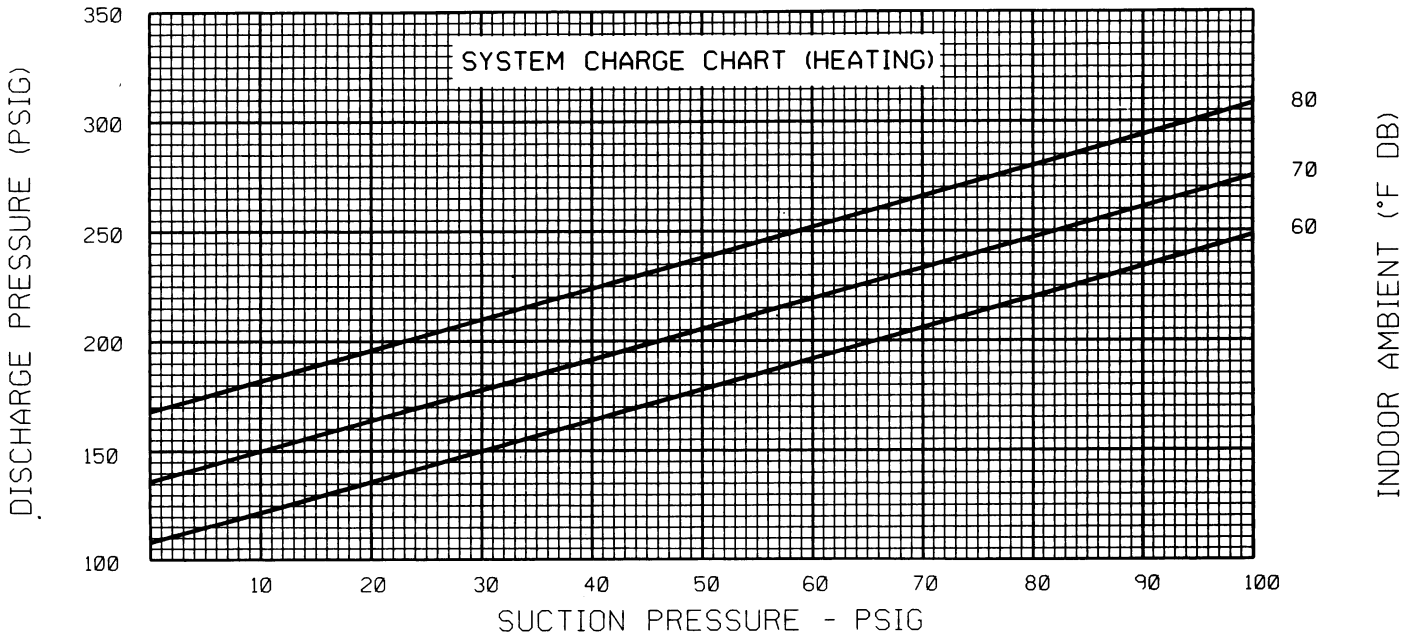
CAUTION: BEFORE FINAL REFRIGERANT CHECK, INDOOR RETURN AIR TEMPERATURE MUST BE BETWEEN 72°F & 76°F DB AT 50% R.H. (HEATING AND COOLING), AND NO ICE ON OUTDOOR COILS (HEATING).

INSTRUCTIONS:

1. CONNECT PRESSURE GAUGES TO SUCTION AND DISCHARGE PORTS ON UNIT.
2. MEASURE AIR TEMPERATURE TO: (a) OUTDOOR COIL FOR COOLING, (b) INDOOR COIL FOR HEATING.
3. PLACE AN "X" ON THE APPROPRIATE CHART WHERE THE SUCTION AND DISCHARGE PRESSURES CROSS.
4. IF "X" IS BELOW AMBIENT TEMPERATURE LINE, ADD CHARGE AND REPEAT STEP 3.
5. IF "X" IS ABOVE AMBIENT TEMPERATURE LINE, RECOVER EXCESS CHARGE AND REPEAT STEP 3. 92-23557-14-00

4 TON HEAT PUMP (12 SEER)



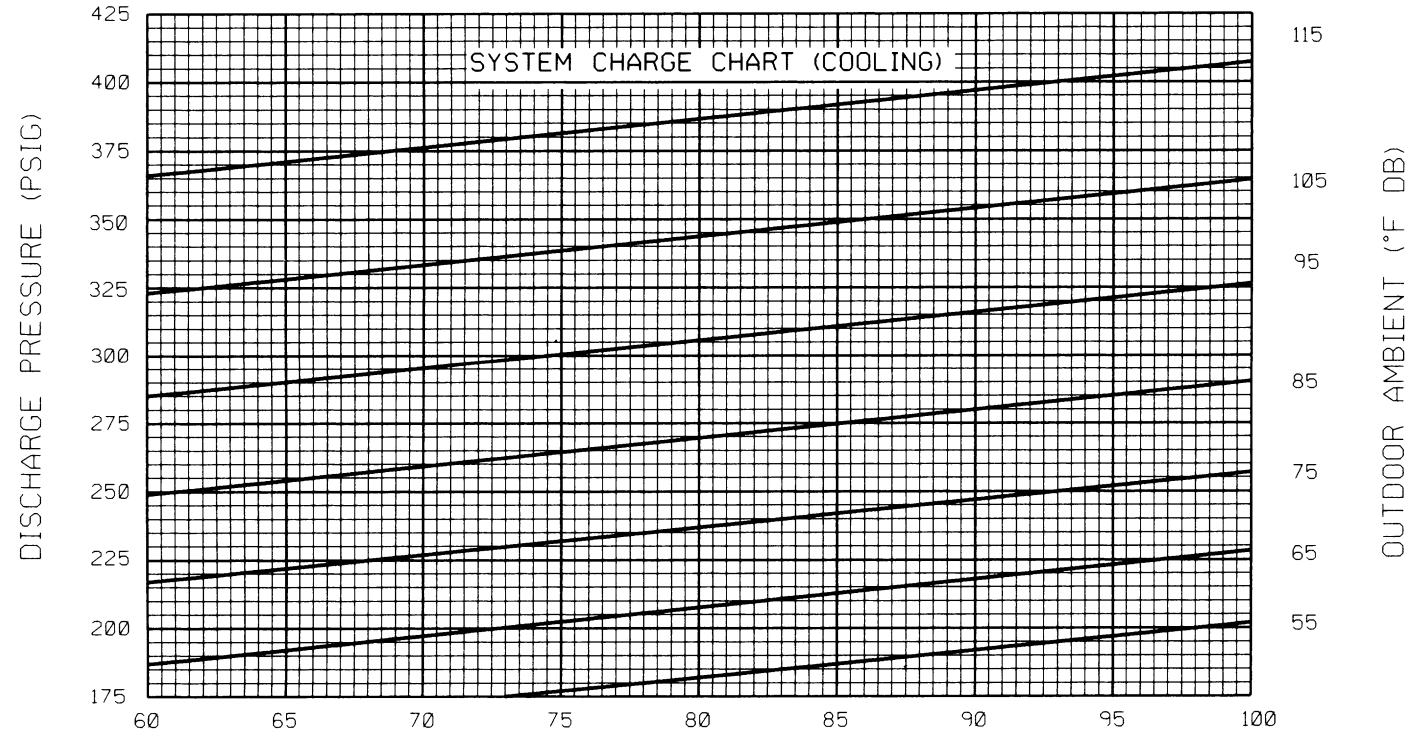


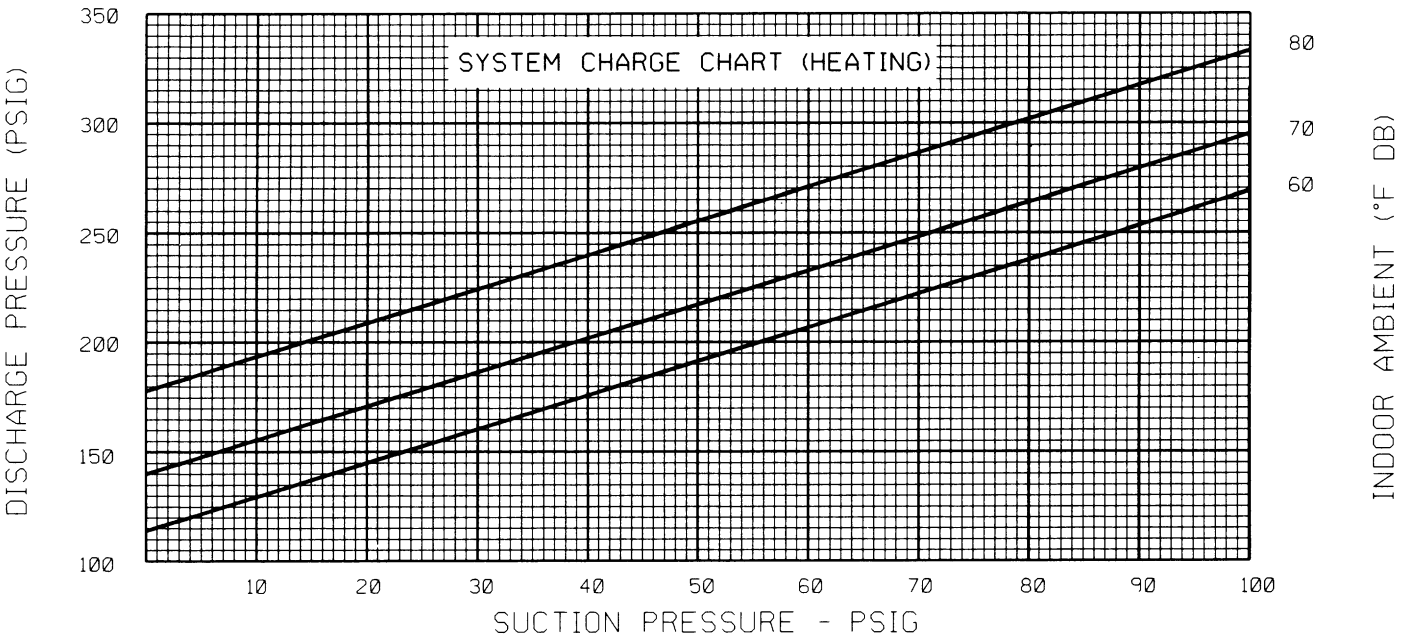
CAUTION: BEFORE FINAL REFRIGERANT CHECK, INDOOR RETURN AIR TEMPERATURE MUST BE BETWEEN 72°F & 76°F DB AT 50% R.H. (HEATING AND COOLING), AND NO ICE ON OUTDOOR COILS (HEATING).

INSTRUCTIONS:

1. CONNECT PRESSURE GAUGES TO SUCTION AND DISCHARGE PORTS ON UNIT.
2. MEASURE AIR TEMPERATURE TO: (a) OUTDOOR COIL FOR COOLING, (b) INDOOR COIL FOR HEATING.
3. PLACE AN "X" ON THE APPROPRIATE CHART WHERE THE SUCTION AND DISCHARGE PRESSURES CROSS.
4. IF "X" IS BELOW AMBIENT TEMPERATURE LINE, ADD CHARGE AND REPEAT STEP 3.
5. IF "X" IS ABOVE AMBIENT TEMPERATURE LINE, RECOVER EXCESS CHARGE AND REPEAT STEP 3. 92-23557-15-00

5 TON HEAT PUMP (10 SEER)



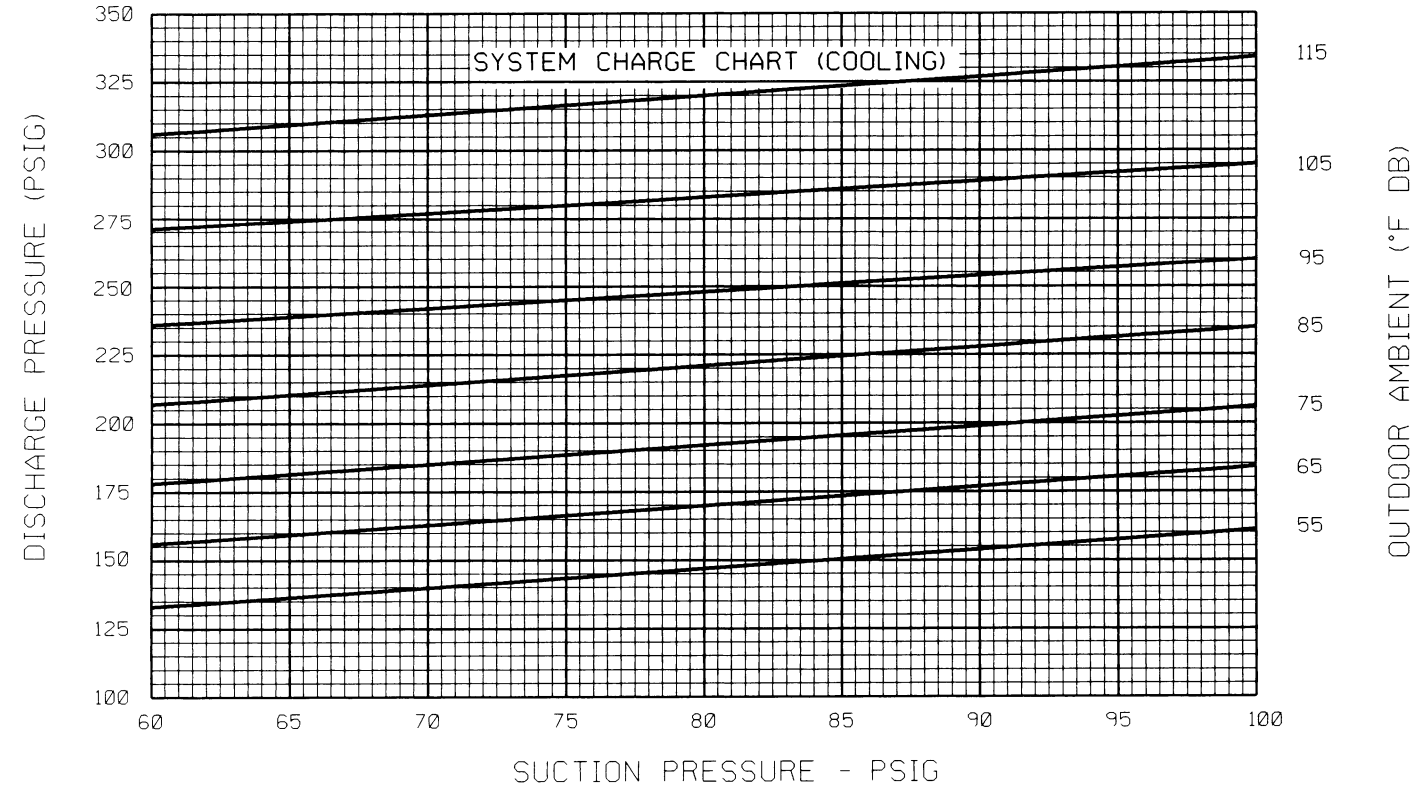


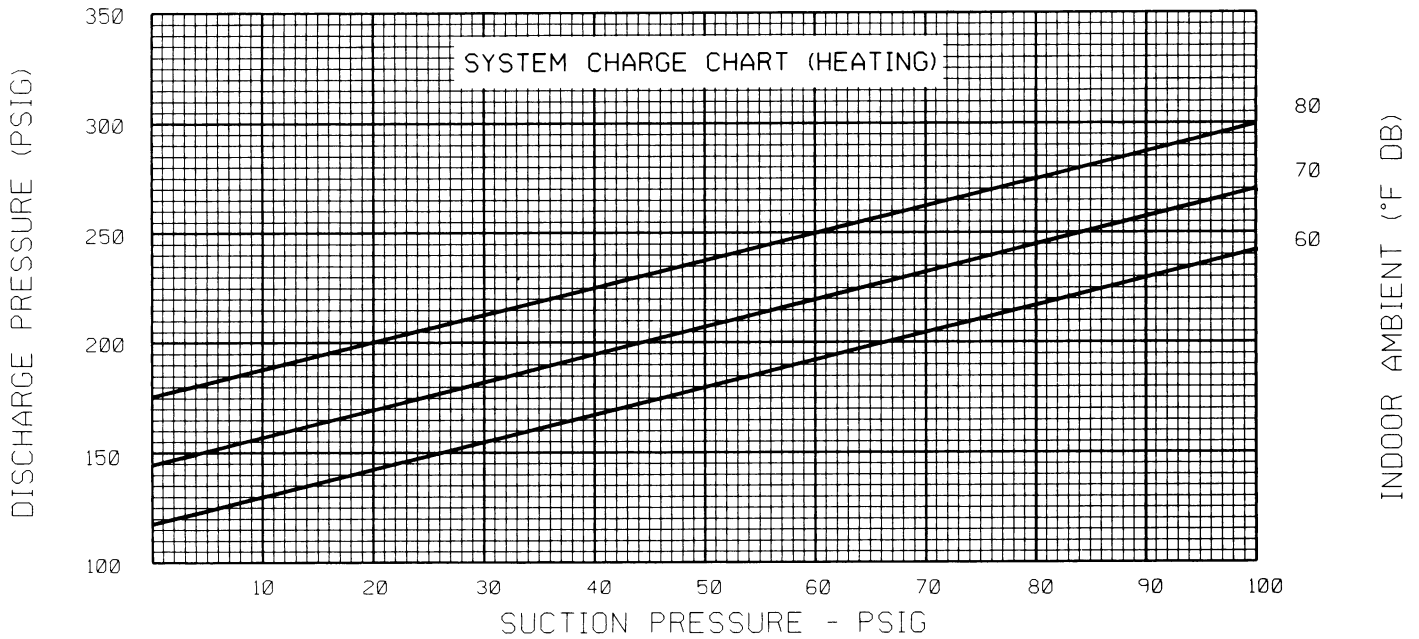
CAUTION: BEFORE FINAL REFRIGERANT CHECK, INDOOR RETURN AIR TEMPERATURE MUST BE BETWEEN 72°F & 76°F DB AT 50% R.H. (HEATING AND COOLING), AND NO ICE ON OUTDOOR COILS (HEATING).

INSTRUCTIONS:

1. CONNECT PRESSURE GAUGES TO SUCTION AND DISCHARGE PORTS ON UNIT.
2. MEASURE AIR TEMPERATURE TO: (a) OUTDOOR COIL FOR COOLING, (b) INDOOR COIL FOR HEATING.
3. PLACE AN "X" ON THE APPROPRIATE CHART WHERE THE SUCTION AND DISCHARGE PRESSURES CROSS.
4. IF "X" IS BELOW AMBIENT TEMPERATURE LINE, ADD CHARGE AND REPEAT STEP 3.
5. IF "X" IS ABOVE AMBIENT TEMPERATURE LINE, RECOVER EXCESS CHARGE AND REPEAT STEP 3. 92-23557-20-00

5 TON HEAT PUMP (12 SEER)





CAUTION: BEFORE FINAL REFRIGERANT CHECK, INDOOR RETURN AIR TEMPERATURE MUST BE BETWEEN 72°F & 76°F DB AT 50% R.H. (HEATING AND COOLING), AND NO ICE ON OUTDOOR COILS (HEATING).

INSTRUCTIONS:

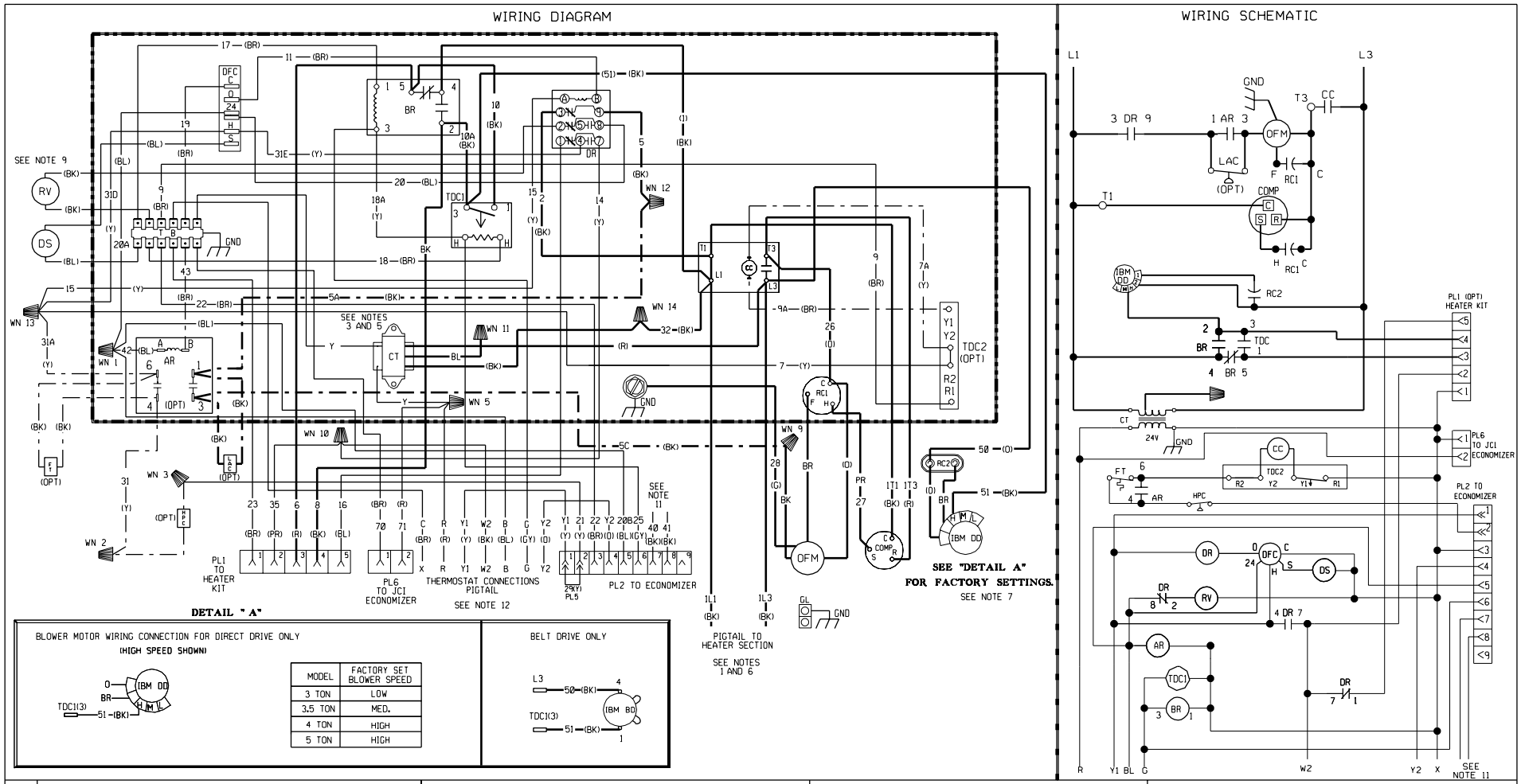
1. CONNECT PRESSURE GAUGES TO SUCTION AND DISCHARGE PORTS ON UNIT.
2. MEASURE AIR TEMPERATURE TO: (a) OUTDOOR COIL FOR COOLING, (b) INDOOR COIL FOR HEATING.
3. PLACE AN "X" ON THE APPROPRIATE CHART WHERE THE SUCTION AND DISCHARGE PRESSURES CROSS.
4. IF "X" IS BELOW AMBIENT TEMPERATURE LINE, ADD CHARGE AND REPEAT STEP 3.
5. IF "X" IS ABOVE AMBIENT TEMPERATURE LINE, RECOVER EXCESS CHARGE AND REPEAT STEP 3. 92-23557-17-00

TROUBLE SHOOTING CHART

⚠ WARNING

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

SYMPTOM	POSSIBLE CAUSE	REMEDY
Unit will not run	• Power off or loose electrical connection	• Check for correct voltage at compressor contactor in control box
	• Thermostat out of calibration-set too high	• Reset
	• Defective 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-
	• Interconnecting low voltage wiring damaged	• Replace thermostat wiring
Condenser fan runs, compressor doesn't	• Run capacitor defective (single phase only)	• Replace
	• 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. At compressor terminals, voltage must be within 10% of rating
	• Low voltage condition	
	• 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
High head-high or normal vapor pressure - Heating mode	• Low air flow - condenser coil	• Check filters - correct to speed
	• Refrigerant overcharge	• Correct system charge
	• Air or non-condensibles in system	• Recover refrigerant, evacuate & recharge
	• Dirty condenser coil	• Check filter - clean coil
Low head-high vapor pressures	• Defective Compressor valves	• Replace compressor
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
	• TXV limiting refrigerant flow	• Replace TXV
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-condensate 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



COMPONENT CODE

AR	ACCESSORY RELAY	OPT	OPTIONAL
BR	BLOWER RELAY	PL	PLUG
CC	COMPRESSOR CONTACTOR	RC	RUN CAPACITOR
COMP	COMPRESSOR	RV	REVERSING VALVE
CT	CONTROL TRANSFORMER	TB	TERMINAL BLOCK
DFC	DEFROST CONTROL	TDC	TIME DELAY CONTROL
DR	DEFROST RELAY	WN	WIRE NUT
DS	DEFROST SENSOR		
FT	FREEZE STAT		
GL	GROUND LUG		
GND	GROUND		
HPC	HIGH PRESSURE CONTROL		
IBM	INDOOR BLOWER MOTOR		
LAC	LOW AMBIENT CONTROL		
OFM	OUTDOOR FAN MOTOR		

NOTES:

1. CONNECTORS SUITABLE FOR USE WITH COPPER CONDUCTORS ONLY.
2. COMPRESSOR MOTOR THERMALLY PROTECTED. ALL 3 PHASE MODELS ARE PROTECTED UNDER PRIMARY SINGLE PHASE CONDITIONS.
3. CONTROL TRANSFORMER PRIMARY LEADS: RED-COM., BLUE-208V., BLACK-230V.. TRANSFORMER FACTORY WIRED FOR 230 VOLTS ON "J" & "C" MODELS. INTERCHANGE BLACK & BLUE LEADS FOR 208 VOLT OPERATION.
4. CONTACTOR FACTORY WIRED. CONNECT FIELD WIRE TO FACTORY SUPPLIED CONTACTOR WIRES IN ELECTRICAL BOX.
5. LOW VOLTAGE CIRCUIT IS N.E.C. CLASS 2 WITH A CLASS 2 TRANSFORMER, 24V. 50/60 HZ SUPPLIED.
6. CONNECT FIELD WIRING IN GROUNDED RAIN TIGHT CONDUIT TO 60 HZ FUSED DISCONNECT.
7. MOTOR FACTORY WIRED FOR CORRECT SPEED.
8. SEE FUSE LABEL ON UNIT FUSE BOX FOR FUSE SIZING AND CLASSIFICATION.
9. REVERSING VALVE ENERGIZED IN HEATING.
10. ALL SWITCHES ARE SHOWN IN COOLING POSITION.
11. WIRES FROM PL2 (7 & 8) GO TO THE MIXED AIR SENSOR ON THE OPTIONAL ECONOMIZER.
12. Y2 IS USED ONLY FOR THE OPTIONAL ECONOMIZER.

WIRING INFORMATION

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

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

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

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

WIRE COLOR CODE

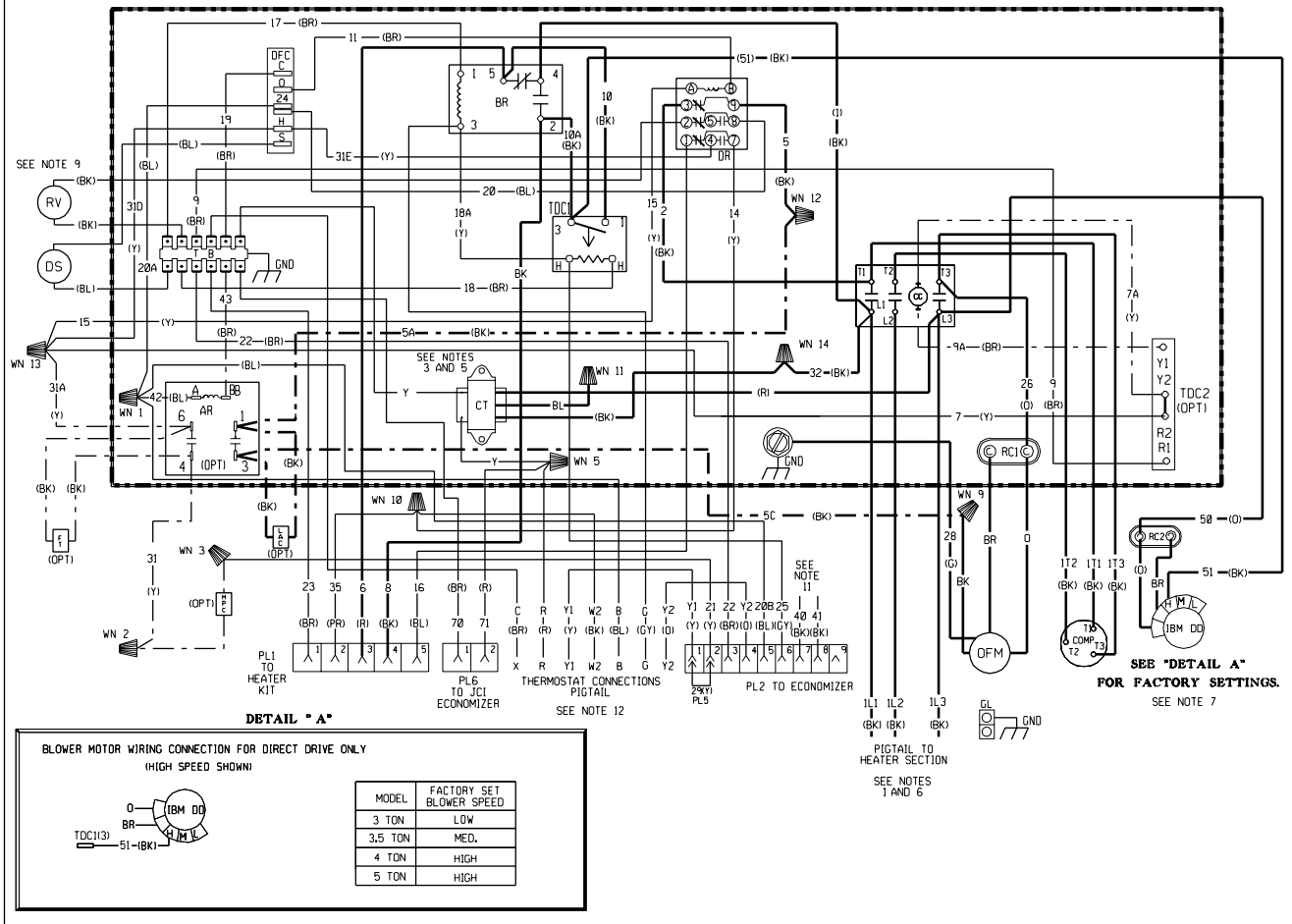
BK__BLACK	O___ORANGE
BR__BROWN	PR__PURPLE
BL__BLUE	R___RED
G___GREEN	W___WHITE
GY__GRAY	Y___YELLOW

ELECTRICAL WIRING DIAGRAM
208 / 230, 1 PHASE
DIRECT DRIVE/BELT DRIVE
HEAT PUMP

DR. BY	APP. BY	DATE	DWG. NO.	REV
RG		6-2-95	90-23595-01	06

DWG. NO. 90-23595-01 REV 06

WIRING DIAGRAM

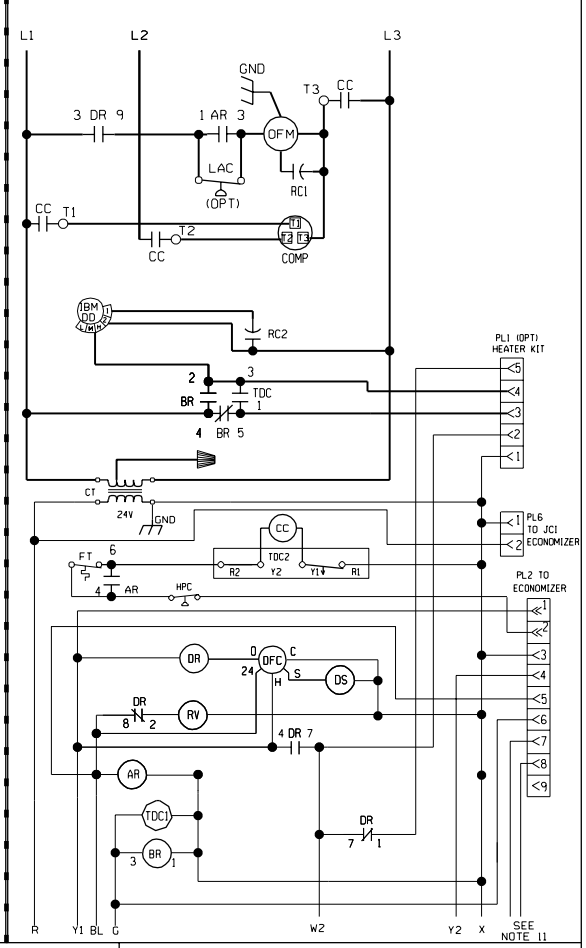


DETAIL " A"

BLOWER MOTOR WIRING CONNECTION FOR DIRECT DRIVE ONLY
(HIGH SPEED SHOWN)

MODEL	FACTORY SET BLOWER SPEED
3 TON	LOW
3.5 TON	MED.
4 TON	HIGH
5 TON	HIGH

WIRING SCHEMATIC



COMPONENT CODE

AR	ACCESSORY RELAY	OPT	OPTIONAL
BR	BLOWER RELAY	PL	PLUG
CC	COMPRESSOR CONTACTOR	RC	RUN CAPACITOR
COMP	COMPRESSOR	RV	REVERSING VALVE
CT	CONTROL TRANSFORMER	TB	TERMINAL BLOCK
DFC	DEFROST CONTROL	TDC	TIME DELAY CONTROL
DR	DEFROST RELAY	WN	WIRE NUT
DS	DEFROST SENSOR		
FT	FREEZE STAT		
GL	GROUND LUG		
GND	GROUND		
HPC	HIGH PRESSURE CONTROL		
IBM	INDOOR BLOWER MOTOR		
LAC	LOW AMBIENT CONTROL		
OFM	OUTDOOR FAN MOTOR		

NOTES:

1. CONNECTORS SUITABLE FOR USE WITH COPPER CONDUCTORS ONLY.
2. COMPRESSOR MOTOR THERMALLY PROTECED. ALL 3 PHASE MODELS ARE PROTECTED UNDER PRIMARY SINGLE PHASE CONDITIONS.
3. CONTROL TRANSFORMER PRIMARY LEADS; RED-COM., BLUE-208V., BLACK-230V. TRANSFORMER FACTORY WIRED FOR 230 VOLTS ON "J" & "C" MODELS. INTERCHANGE BLACK & BLUE LEADS FOR 208 VOLT OPERATION.
4. CONTACTOR FACTORY WIRED. CONNECT FIELD WIRE TO FACTORY SUPPLIED CONTACTOR WIRES IN ELECTRICAL BOX.
5. LOW VOLTAGE CIRCUIT IS N.E.C. CLASS 2 WITH A CLASS 2 TRANSFORMER. 24V, 50/60 HZ SUPPLIED.
6. CONNECT FIELD WIRING IN GROUNDED RAIN TIGHT CONDUIT TO 60 HZ FUSED DISCONNECT.
7. MOTOR FACTORY WIRED FOR CORRECT SPEED.
8. SEE FUSE LABEL ON UNIT FUSE BOX FOR FUSE SIZING AND CLASSIFICATION.
9. REVERSING VALVE ENERGIZED IN HEATING.
10. ALL SWITCHES ARE SHOWN IN COOLING POSITION.
11. WIRES FROM PL2 (7 & 8) GO TO THE MIXED AIR SENSOR ON THE OPTIONAL ECONOMIZER.
12. Y2 IS USED ONLY FOR THE OPTIONAL ECONOMIZER.

WIRING INFORMATION

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

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

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

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

WIRE COLOR CODE

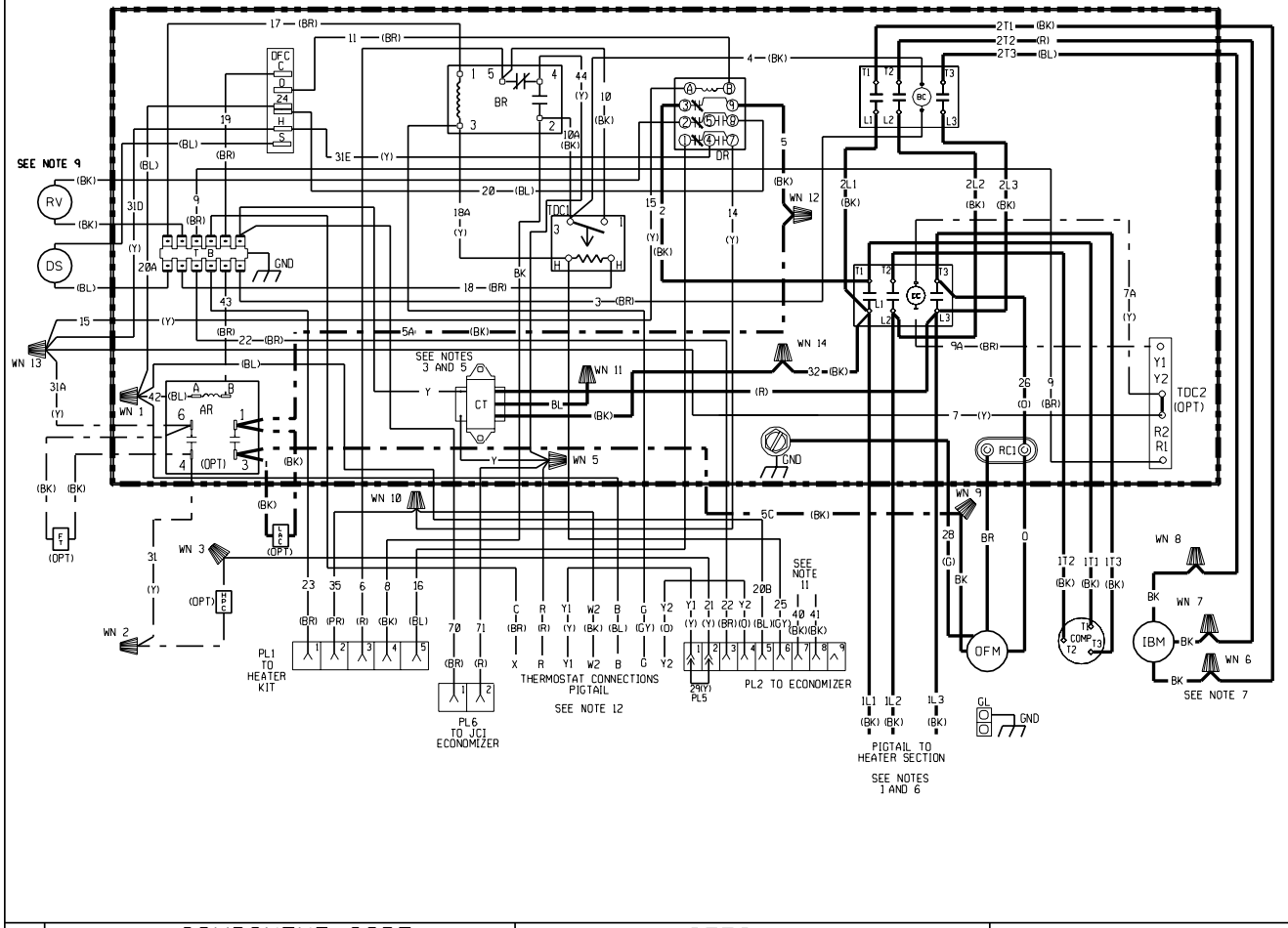
BK__BLACK	O___ORANGE
BR__BROWN	PR__PURPLE
BL__BLUE	R___RED
G___GREEN	W___WHITE
GY__GRAY	Y___YELLOW

ELECTRICAL WIRING DIAGRAM
208 / 230, 3 PHASE
DIRECT DRIVE
HEAT PUMP

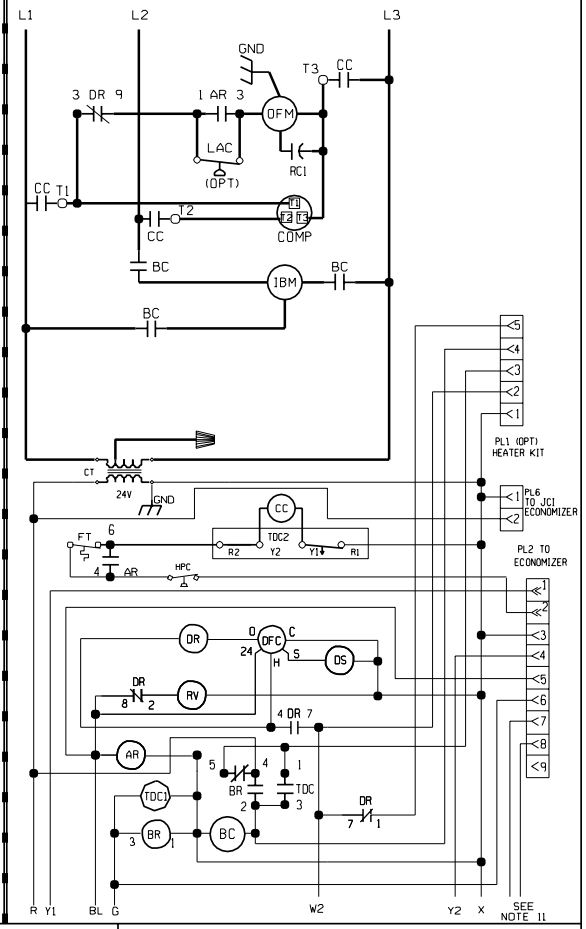
DR. BY	APP. BY	DATE	DWG. NO.	REV
RG		6-2-95	90-23595-03	06

DWG. NO. 90-23595-03 REV 06

WIRING DIAGRAM



WIRING SCHEMATIC



COMPONENT CODE

AR	ACCESSORY RELAY	OPT	OPTIONAL
BC	BLOWER CONTACTOR	PL	PLUG
BR	BLOWER RELAY	RC	RUN CAPACITOR
CC	COMPRESSOR CONTACTOR	RV	REVERSING VALVE
COMP	COMPRESSOR	TB	TERMINAL BLOCK
CT	CONTROL TRANSFORMER	TDC	TIME DELAY CONTROL
DFC	DEFROST CONTROL	WN	WIRE NUT
DR	DEFROST RELAY		
DS	DEFROST SENSOR		
FT	FREEZE STAT		
GL	GROUND LUG		
GND	GROUND		
HPC	HIGH PRESSURE CONTROL		
IBM	INDOOR BLOWER MOTOR		
LAC	LOW AMBIENT CONTROL		
OFM	OUTDOOR FAN MOTOR		

NOTES:

1. CONNECTORS SUITABLE FOR USE WITH COPPER CONDUCTORS ONLY.
2. COMPRESSOR MOTOR THERMALLY PROTECTED. ALL 3 PHASE MODELS ARE PROTECTED UNDER PRIMARY SINGLE PHASE CONDITIONS.
3. CONTROL TRANSFORMER PRIMARY LEADS:
   60 HZ.
   RED-COM., BLUE-208V., BLACK-230V., BLACK/RED-460V., BLACK/BLUE-575V. TRANSFORMER FACTORY WIRED FOR 230 VOLTS ON "J" & "C" MODELS. INTERCHANGE BLACK & BLUE LEADS FOR 208 VOLT OPERATION. 460 & 575 VOLTS MODELS FACTORY WIRED FOR CORRECT VOLTAGE.
   50 HZ.
   ORANGE-COMMON, BLUE-380V, BLACK-415V.
4. CONTACTOR FACTORY WIRED. CONNECT FIELD WIRE TO FACTORY SUPPLIED CONTACTOR WIRES IN ELECTRICAL BOX.
5. LOW VOLTAGE CIRCUIT IS N.E.C. CLASS 2 WITH A CLASS 2 TRANSFORMER, 24V, 50/60 HZ SUPPLIED.
6. CONNECT FIELD WIRING IN GROUND RAIN TIGHT CONDUIT TO 60 HZ FUSED DISCONNECT.
7. MOTOR FACTORY WIRED FOR CORRECT SPEED.
8. SEE FUSE LABEL ON UNIT FUSE BOX FOR FUSE SIZING AND CLASSIFICATION.
9. REVERSING VALVE ENERGIZED IN HEATING.
10. ALL SWITCHES ARE SHOWN IN COOLING POSITION.
11. WIRES FROM PL2 (7 & 8) GO TO THE MIXED AIR SENSOR ON THE OPTIONAL ECONOMIZER.
12. Y2 IS USED ONLY FOR THE OPTIONAL ECONOMIZER.

WIRING INFORMATION

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

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

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

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

WIRE COLOR CODE

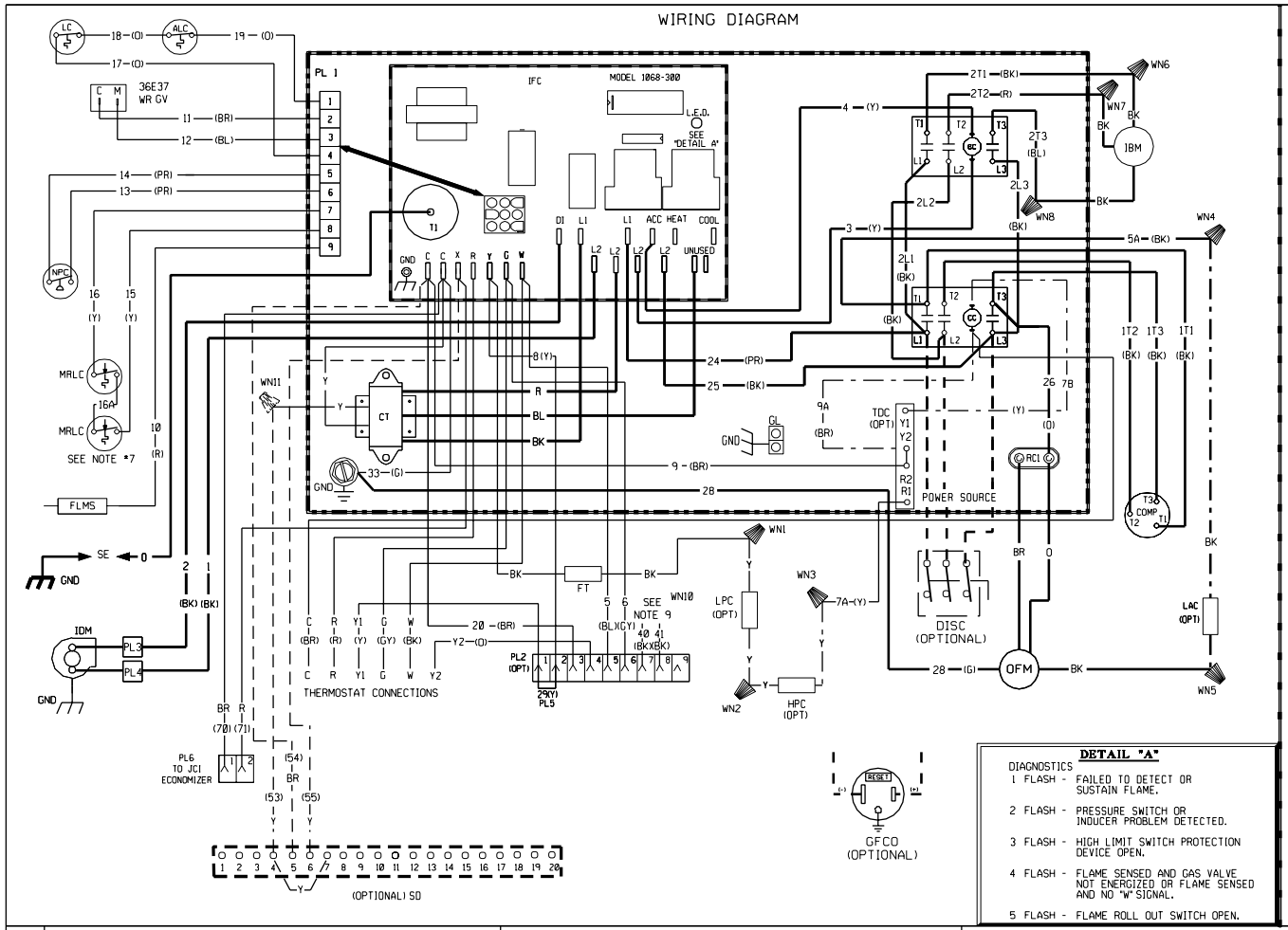
BK__BLACK	O___ORANGE
BR__BROWN	PR__PURPLE
BL__BLUE	R___RED
G___GREEN	W___WHITE
GY__GRAY	Y___YELLOW

ELECTRICAL WIRING DIAGRAM

208/230/460/575V, 3 PHASE, 60 HZ.
200/220V & 380/415V, 3 PHASE, 50 HZ.
BELT DRIVE
HEAT PUMP

DR. BY	APP. BY	DATE	DWG. NO.	REV
RG		6-9-95	90-23595-05	08

DWG. NO. 90-23595-05 REV. 08



DETAIL "A"

DIAGNOSTICS

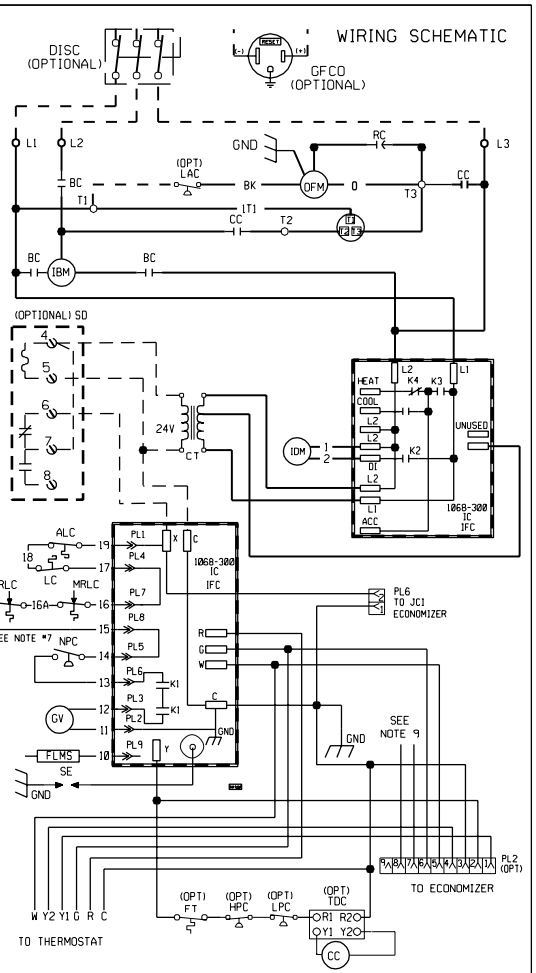
1 FLASH - FAILED TO DETECT OR SUSTAIN FLAME.

2 FLASH - PRESSURE SWITCH OR INDUCER PROBLEM DETECTED.

3 FLASH - HIGH LIMIT SWITCH PROTECTION DEVICE OPEN.

4 FLASH - FLAME SENSED AND GAS VALVE NOT ENERGIZED OR FLAME SENSED AND NO "W" SIGNAL.

5 FLASH - FLAME ROLL OUT SWITCH OPEN.



COMPONENT CODE

ALC	AUX. LIMIT CONTROL	LC	LIMIT CONTROL
BC	BLOWER CONTACTOR	LPC	LOW PRESSURE CONTROL
CC	COMPRESSOR CONTACTOR	MRLC	MANUAL RESET LIMIT CONTROL
COMP	COMPRESSOR	NPC	NEGATIVE PRESSURE CONTROL
CT	CONTROL TRANSFORMER	OFM	OUTDOOR FAN MOTOR
DISC	DISCONNECT SWITCH	PL	PLUG
FLMS	FLAME SENSOR	RC	RUN CAPACITOR
FT	FREEZE STAT	SD	SMOKE DETECTOR
GFCO	GROUND FAULT CONVENIENCE OUTLET	SE	SPARK ELECTRODE
GL	GROUND LUG	TDC	TIME DELAY CONTROL
GND	GROUND	WN	WIRE NUT
GV	GAS VALVE		
HPC	HIGH PRESSURE CONTROL		
IBM	INDOOR BLOWER MOTOR DIRECT DRIVE		
IDM	INDUCED DRAFT MOTOR		
IFC	INTERGRATED FURNACE CONTROL		
LAC	LOW AMBIENT COOLING CONTROL		

NOTES:

1. CONNECTORS SUITABLE FOR USE WITH COPPER CONDUCTORS ONLY.
2. COMPRESSOR MOTOR THERMALLY PROTECED. ALL 3 PHASE MODELS ARE PROTECTED UNDER PRIMARY SINGLE PHASE CONDITIONS.
3. CONTROL TRANSFORMER PRIMARY LEADS: RED-COMMON, BLUE-208V, BLACK-230V. TRANSFORMER FACTORY WIRED FOR 230 VOLTS. INTERCHANGE BLACK FOR BLUE LEADS FOR 208V OPERATION.
4. CONTACTOR FACTORY WIRED. CONNECT FIELD WIRE TO FACTORY SUPPLIED CONTACTOR IN ELECTRICAL BOX.
5. LOW VOLTAGE CIRCUIT IS N.E.C. CLASS 2 WITH A CLASS 2 TRANSFORMER, 24V, 50/60 HZ SUPPLIED.
6. CONNECT FIELD WIRING IN GROUNDED RAIN TIGHT CONDUIT TO 60 HZ FUSED DISCONNECT.
7. ONLY ONE MRLC IS NEEDED ON THE 80,000 INPUT UNIT.
8. MOTOR FACTORY WIRED FOR CORRECT SPEED.
9. WIRES FROM PL2 (7 & 8) GO TO THE MIXED AIR SENSOR ON THE OPTIONAL ECONOMIZER.
10. Y2 IS USED ONLY FOR THE OPTIONAL ECONOMIZER.

WIRING INFORMATION

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

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

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

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

WIRE COLOR CODE

BK__BLACK	O___ORANGE
BR__BROWN	PR__PURPLE
BL__BLUE	R___RED
G___GREEN	W___WHITE
GY__GRAY	Y___YELLOW

ELECTRICAL WIRING DIAGRAM

208 / 230, 3 PHASE, 60 HZ
200 / 220, 3 PHASE, 50 HZ
BELT DRIVE

DR. BY	APP. BY	DATE	DWG. NO.	REV
RG		5-25-95	90-23596-05	08

DWG. NO. 90-23596-05 REV 08