

RHEEM MANUFACTURING CO.

RESEARCH & DEVELOPMENT DEPARTMENT

R E V	01	REVISED TO REPLACE ILLUSTRATIONS ON PAGES 8 AND 10 REVISED SECTION 12.1 ADDED WIRING DIAGRAM SECTION AND MISCELLANEOUS TEXT REVISIONS.	MJM	H-0043S003 10-12-17		
	02	REVISED FOR MISCELLANEOUS TEXT REVISIONS.	VYM	Y-0699S065 05-30-19		

STANDARD TOLERANCE UNLESS OTHERWISE NOTED: -FRACTIONAL $\pm 1/32$ -ANGULAR $+1^{\circ} -3^{\circ}$ -DECIMAL $\pm .030$ -REFERENCE ()
NOTE: ALL BRAKES ARE 90° UNLESS OTHERWISE SPECIFIED

R&D DEPARTMENT PRINTED MATERIAL

NOTE:

WHEN PRINTED MATERIAL IS RECEIVED ON THIS PART NUMBER, CHECK THAT THE REVISION IS CORRECT AND THAT ANY SPECIAL INSTRUCTIONS LISTED BELOW WERE FOLLOWED.

SPECIAL INSTRUCTIONS

(3) 5/16" DIA. HOLES (TO FIT 3-RING BINDER) REQUIRED ALONG LEFT EDGE OF BOOKLET

NOTE: ALL CHANGES MADE TO THIS MANUAL MUST ALSO BE MADE TO 92-20521-109.

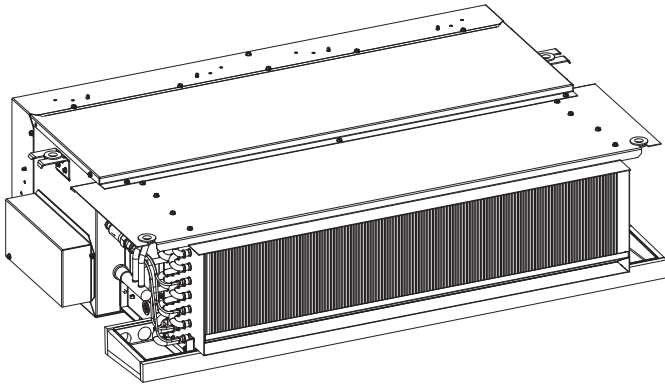
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INSTALLATION INSTRUCTIONS FOR EL3T- AIR HANDLERS - ENGLISH	PART NO. 92-20521-108	REV. 02
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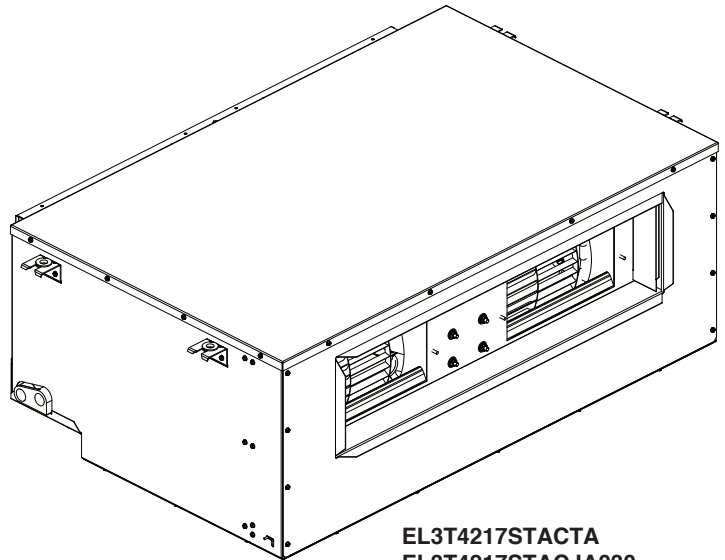
INSTALLATION INSTRUCTIONS

EL3T HIGH EFFICIENCY AIR HANDLERS

FEATURING INDUSTRY STANDARD R-410A REFRIGERANT 



EL3T1812SPBCTA
EL3T1812SPBCJA030
EL3T2412SPBCTA
EL3T2212SPBCJA030
EL3T3012SPBCTA
EL3T2812SPBCJA030
EL3T3612SPBCTA
EL3T3212SPBCJA030



EL3T4217STACTA
EL3T4217STACJA030
EL3T4817STACTA
EL3T4817STACJA030
EL3T6017STACTA
EL3T5517STACJA030
EL3T6518STACTA
EL3T6518STACJA030



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.



الهيئة السعودية للمواصفات والمقاييس والجودة
Saudi Standards, Metrology and Quality Org.



ISO 9001:2008

Certificate Number: 30164

DO NOT DESTROY THIS MANUAL

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



TABLE OF CONTENTS

1.0 SAFETY INFORMATION	3
2.0 GENERAL INFORMATION	5
2.1 Important Information About Efficiency and Indoor Air Quality	5
2.2 Receiving	6
2.3 Clearances	7
2.4 Model Number Explanation	8
2.4A Available Models	9
2.5 Dimensions and Weights	10
3.0 APPLICATIONS	12
3.1 Horizontal Return (ALL MODELS)	12
3.2 Vertical Return (1.5 - 3 TON MODELS ONLY)	13
3.3 Installation in an Unconditioned Space	13
3.4 Installation in Mobile/Manufactured Homes	13
3.5 Free Return (Non-Ducted) Applications	13
4.0 ELECTRICAL WIRING	15
4.1 Power Wiring	14
4.2 Control Wiring	15
4.2B Thermostat Connections	17
4.3 Grounding	17
4.4 Electrical Wiring	17
4.5 Blower Motor Electrical Data: (-)L3T	17
4.6 Copper Wire Size	17
4.7 Heater Kit Supplemental Information	18
5.0 AIRFLOW PERFORMANCE	19
5.1 Airflow Performance Data	19-26
6.0 DUCTWORK	26
7.0 REFRIGERANT CONNECTIONS	28
7.1 TEV Sensing Bulb	29
7.2 Condensate Drain Tubing	29
8.0 AIR FILTER	30
9.0 SEQUENCE OF OPERATION	30
9.1 Cooling	30
9.2 Heating (electric heat only)	30
9.3 Blower Time Delay (heating or cooling)	30
9.4 Room Thermostat (anticipator setting)	30
10.0 CALCULATIONS	31
10.1 Calculating Temperature Rise	31
10.2 Calculating BTUH Heating Capacity	31
10.3 Calculating Airflow CFM	31
10.4 Calculating Correction Factor	31
11.0 PRE-START CHECKLIST	32
12.0 MAINTENANCE	32
12.1 Air Filter	32
12.2 Indoor Coil/Drain Pan/Drain Line	33
12.3 Blower Motor & Wheels	33
12.4 Lubrication	33
12.5 Blower Assembly Removal and Replacement (1.5-3 Ton Models)	34
12.6 Blower Assembly Removal and Replacement (3.5-5.5 Ton Models)	34
12.7 Motor Replacement	34
12.8 Blower Wheel Replacement	34
13.0 REPLACEMENT PARTS	36
14.0 ACCESSORIES - KITS - PARTS	36
15.0 WIRING DIAGRAMS	37

▲ WARNING (SEE SECTION 4.0: ELECTRICAL WIRING)

Disconnect all power to unit before installing or servicing. More than one disconnect switch may be required to de-energize the equipment. Hazardous voltage can cause severe personal injury or death.

▲ WARNING (SEE SECTION 12.5: BLOWER ASSEMBLY REMOVAL & REPLACEMENT)

If removal of the blower assembly is required, all disconnect switches supplying power to the equipment must be de-energized and locked (if not in sight of unit) so the field power wires can be safely removed from the blower assembly. Failure to do so can cause electrical shock resulting in personal injury or death.

▲ WARNING

Because of possible damage to equipment or personal injury, installation, service, and maintenance should be performed by a trained, qualified service personnel. Consumer service is recommended only for filter cleaning/replacement. Never operate the unit with the access panels removed.

1.0 SAFETY INFORMATION

▲ WARNING

Duct leaks can create an unbalanced system and draw pollutants such as dirt, dust, fumes and odors into the home causing property damage. Fumes and odors from toxic, volatile or flammable chemicals, as well as automobile exhaust and carbon monoxide (CO), can be drawn into the living space through leaking ducts and unbalanced duct systems causing personal injury or death (see Figure 1).

- If air-moving equipment or ductwork is located in garages or off-garage storage areas - all joints, seams, and openings in the equipment and duct must be sealed to limit the migration of toxic fumes and odors including carbon monoxide from migrating into the living space.
- If air-moving equipment or ductwork is located in spaces containing fuel burning appliances such as water heaters or boilers - all joints, seams, and openings in the equipment and duct must also be sealed to prevent depressurization of the space and possible migration of combustion byproducts including carbon monoxide into the living space.

▲ 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.

▲ WARNING

Make sure hands, tools or other objects do not come in contact with any rotating component(s) such as the blower wheel(s) or motor shaft. Personal injury or damage to equipment can occur.

▲ WARNING (SEE SECTION 4.3: GROUNDING)

The unit must be permanently grounded. Failure to do so can result in electrical shock causing personal injury or death.

▲ WARNING (SEE SECTION 12.0: MAINTENANCE)

Units with circuit breaker(s) meet requirements as a service disconnect switch, however, if access is required to the line side (covered) of the circuit breaker, this side of the breaker(s) will be energized with the breaker(s) de-energized. Contact with the line side can cause electrical shock resulting in personal injury or death.

▲ WARNING (SEE SECTION 5.0: DUCTWORK)

Do not, under any circumstances, connect return ductwork to any other heat producing device such as fireplace insert, stove, etc. Unauthorized use of such devices may result in fire, carbon monoxide poisoning, explosion, personal injury or property damage.

▲ CAUTION

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

Children should be supervised to ensure that they do not play with the appliance.

⚠ WARNING (SEE SECTION 12.6: MOTOR REPLACEMENT)

To avoid electrical shock which can result in personal injury or death, use only the screws furnished in the motor shell mounting holds. Screws are #8-18 x .25 in. long blunt nose thread forming. Screws longer than 1/4 in. may contact the motor winding.

⚠ WARNING (SEE SECTION 7.0: AIR FILTER)

Do not operate the system without filters. A portion of the dust entrained in the air may temporarily lodge in the duct runs and at the supply registers. Any circulated dust particles could be heated and charred by contact with the air handler elements. This residue could soil ceilings, walls, drapes, carpets and other articles in the house.

Soot damage may occur with filters in place, when certain types of candles, oil lamps or standing pilots are burned.

⚠ WARNING

The first 36 inches of supply air plenum and ductwork must be constructed of sheet metal as required by NFPA 90B. The supply air plenum or duct must have a solid sheet metal bottom directly under the unit with no openings, registers or flexible air ducts located in it. If flexible supply air ducts are used they may be located only in the vertical walls of a rectangular plenum, a minimum of 6 inches from the solid bottom. Metal plenum or duct may be connected to the combustible floor base, if not, it must be connected to the unit supply duct flanges such that combustible floor or other combustible material is not exposed to the supply air opening from the downflow unit. Exposing combustible (non-metal) material to the supply opening of a downflow unit can cause a fire resulting in property damage, personal injury or death.

Exceptions to downflow warnings:

- Installations on concrete floor slab with supply air plenum and ductwork completely encased in not less than 2 inches of concrete (See NFPA 90B).

⚠ CAUTION (SEE SECTION 3.3: HORIZONTAL)

Horizontal units must be configured for right hand air supply or left hand air supply. Horizontal drain pan must be located under indoor coil. Failure to use the drain pan can result in property damage.

⚠ CAUTION (SEE SECTION 2.1: RECEIVING)

In compliance with recognized codes, it is recommended that an auxiliary drain pan be installed under all evaporator coils or units containing evaporator coils that are located in any area of a structure where damage to the building or building contents may occur as a result of an overflow of the coil drain pan or a stoppage in the primary condensate drain piping. See accessories for auxiliary horizontal overflow pan RXBM.

⚠ NOTICE

When used in cooling applications, excessive sweating may occur when unit is installed in an unconditioned space. This can result in property damage.

⚠ NOTICE

Improper installation, or installation not made in accordance with the Underwriters Laboratory (UL) certification or these instructions, can result in unsatisfactory operation and/or dangerous conditions and are not covered by the unit warranty.

⚠ NOTICE

In compliance with recognized codes, it is recommended that an auxiliary drain pan be installed under all evaporator coils or units containing evaporator coils that are located in any area of a structure where damage to the building or building contents may occur as a result of an overflow of the coil drain pan or a stoppage in the primary condensate drain piping. See accessories section of these instructions for auxiliary horizontal overflow pan information (model RXBM).

▲ NOTICE

Use of this air-handler during construction is not recommended. If operation during construction is absolutely required, the following temporary installation requirements must be followed:

Installation must comply with all Installation Instructions in this manual including the following items:

- Properly sized power supply and circuit breaker/fuse
- Air-handler operating under thermostatic control;
- Return air duct sealed to the air-handler;
- Air filters must be in place;
- Correct air-flow setting for application
- Removing the coil and storing it in a clean safe place is highly recommended until construction is completed and the outdoor unit is installed.
- Clean air-handler, duct work, and components including coil upon completion of the construction process and verify proper air-handler operating conditions according as stated in this instruction manual.
- NOTE: Electric strip heater elements tend to emit a burning odor for a few days if dust has accumulated during construction. Heater elements are easily damaged. Take great care when cleaning them. Low pressure compressed air is recommended for cleaning elements.

2.0 GENERAL INFORMATION

2.1 IMPORTANT INFORMATION ABOUT EFFICIENCY AND INDOOR AIR QUALITY

Reference the model nameplate on the unit for the following product information:

- Model Number
- Serial Number
- Country of Origin
- Rated Voltage and Frequency
- Rated T1 and T3 conditions for:
 - Rated Current
 - Rated Power (kW)
 - Rated Capacity
 - Rated EER

The Estimated Annual Energy Consumption of this product is calculated using the following formula:

Estimated Annual Energy Consumption = Rated Power (kW) at T1 conditions multiplied by 2700 working hours.

▲ WARNING



Carbon Monoxide (CO) Poisoning Can Cause Severe Injury or Death.

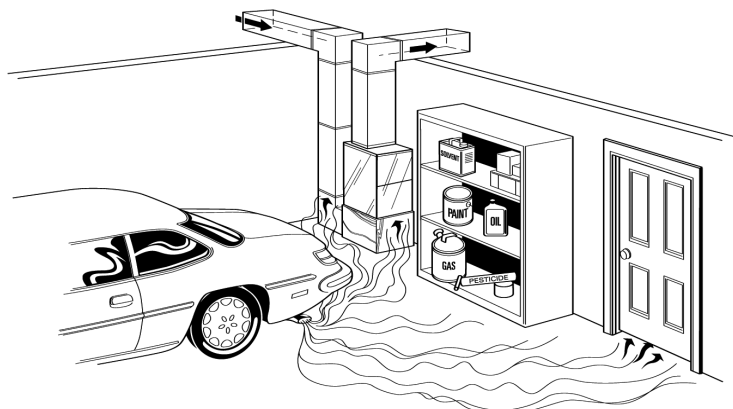
Carbon Monoxide from the exhaust of motor vehicles and other fuel burning devices can be drawn into the living space by the operation of the central heating and air conditioning system.

Exhaust from motor vehicles, generators, garden tractors, mowers, portable heaters, charcoal and gas grills, gasoline powered tools, and outdoor camping equipment contains carbon monoxide, a poisonous gas that can kill you. You cannot see it, smell it, or taste it.

- Do NOT operate an automobile or any engine in a garage for more than the few seconds it takes to enter or exit the garage.
- Do NOT operate any fuel-burning device in an enclosed or partly enclosed space, or near building windows, doors or air intakes.

The U.S. Consumer Product Safety Commission (CPSC) and Health Canada recommend the installation of UL or CSA certified Carbon Monoxide Alarm(s) in every home.

FIGURE 1
MIGRATION OF DANGEROUS SUBSTANCES, FUMES, AND ODORS INTO LIVING SPACES



Adapted from *Residential Duct Diagnostics and Repair*, with permission of Air Conditioning Contractors of America (ACCA).

WARNING

Duct leaks can create an unbalanced system and draw pollutants such as dirt, dust, fumes and odors into the home causing property damage. Fumes and odors from toxic, volatile or flammable chemicals, as well as automobile exhaust and carbon monoxide (CO), can be drawn into the living space through leaking ducts and unbalanced duct systems causing personal injury or death (see Figure 1).

- If air-moving equipment or ductwork is located in garages or off-garage storage areas - all joints, seams, and openings in the equipment and duct must be sealed to limit the migration of toxic fumes and odors including carbon monoxide from migrating into the living space.
- If air-moving equipment or ductwork is located in spaces containing fuel burning appliances such as water heaters or boilers - all joints, seams, and openings in the equipment and duct must also be sealed to prevent depressurization of the space and possible migration of combustion byproducts including carbon monoxide into the living space.

NOTICE

Improper installation, or installation not made in accordance with the Underwriters Laboratory (UL) certification or these instructions, can result in unsatisfactory operation and/or dangerous conditions and are not covered by the unit warranty.

Central cooling and heating equipment is only as efficient as the duct system that carries the cooled or heated air. To maintain efficiency, comfort and good indoor air quality, it is important to have the proper balance between the air being supplied to each room and the air returning to the cooling and heating equipment.

Proper balance and sealing of the duct system improves the efficiency of the heating and air conditioning system and improves the indoor air quality of the home by reducing the amount of airborne pollutants that enter homes from spaces where the ductwork and/or equipment is located. The manufacturer and the U.S. Environmental Protection Agency's Energy Star Program recommend that central duct systems be checked by a qualified contractor for proper balance and sealing.

NOTICE

In compliance with recognized codes, it is recommended that an auxiliary drain pan be installed under all evaporator coils or units containing evaporator coils that are located in any area of a structure where damage to the building or building contents may occur as a result of an overflow of the coil drain pan or a stoppage in the primary condensate drain piping. See accessories section of these instructions for auxiliary horizontal overflow pan information (model RXBM).

2.2 RECEIVING

Immediately upon receipt, all cartons and contents should be inspected for transit damage. Units with damaged cartons should be opened immediately. If damage is found, it should be noted on the delivery papers, and a damage claim filed with the last carrier.

- After unit has been delivered to job site, remove carton taking care not to damage unit.
- Check the unit rating plate for unit size, electric heat, coil, voltage, phase, etc. to be sure equipment matches what is required for the job specification.
- Read the entire instructions before starting the installation.
- Some building codes require extra cabinet insulation and gasketing when unit is installed in attic applications.
- If installed in an unconditioned space, apply caulking around the power wires, control wires, refrigerant tubing and condensate line where they enter the cabinet. Seal the power wires on the inside where they exit conduit opening. Caulking is required to pre-vent air leakage into and condensate from forming inside the unit, control box, and on electrical controls.
- Install the unit in such a way as to allow necessary access to the coil/filter rack and blower/control compartment.
- Install the unit in a level position to ensure proper condensate drainage. Make sure unit is level in both directions within 1/8".

- Install the unit in accordance with any local code which may apply and the national codes. Latest editions are available from: “National Fire Protection Association, Inc., Batterymarch Park, Quincy, MA 02269.” These publications are:
 - ANSI/NFPA No. 70-(Latest Edition) National Electrical Code.
 - NFPA90A Installation of Air Conditioning and Ventilating Systems.
 - NFPA90B Installation of warm air heating and air conditioning systems.
- The equipment has been evaluated in accordance with the Code of Federal Regulations, Chapter XX, Part 3280.

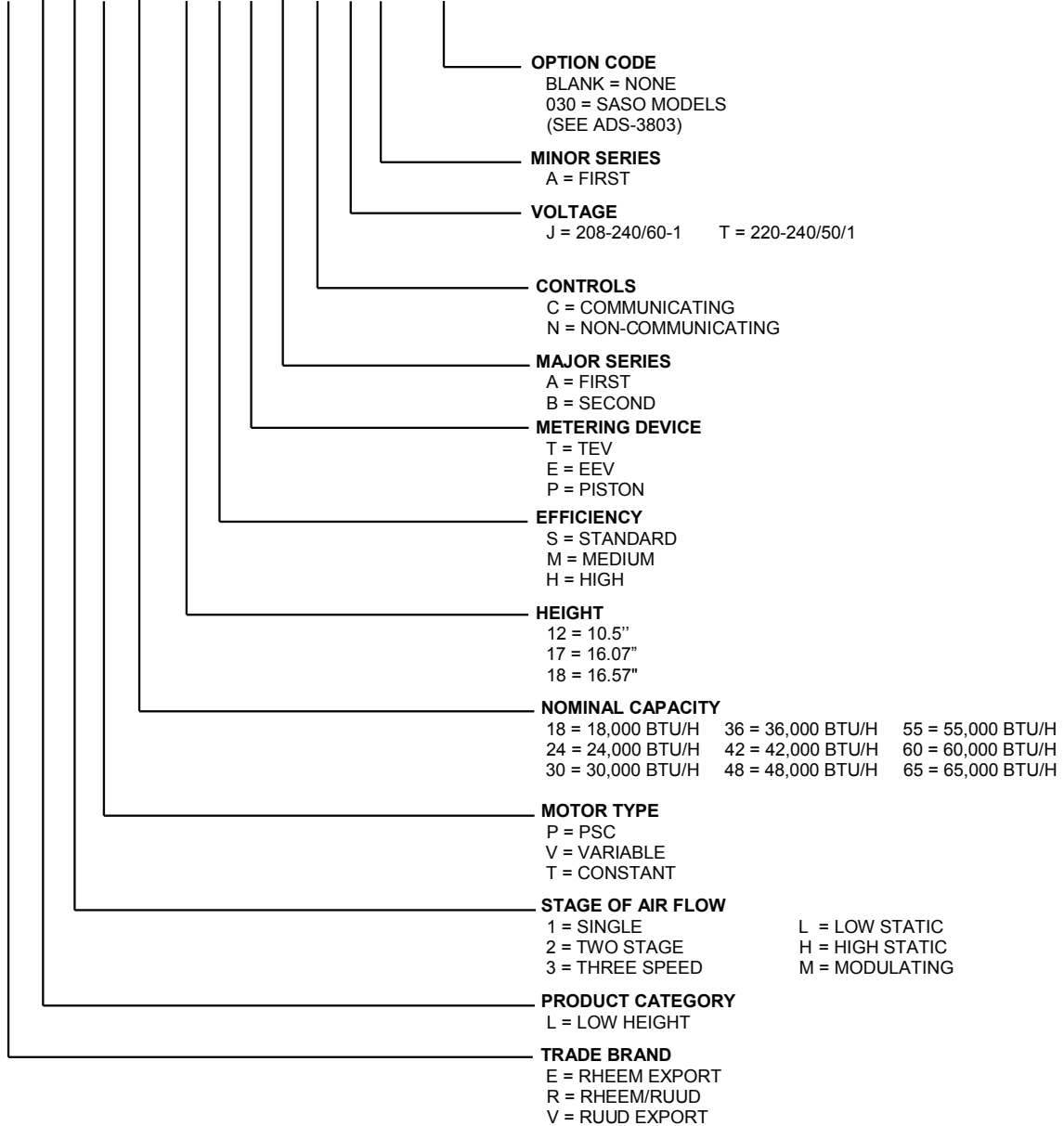
2.3 CLEARANCES

- All units are designed for “0” inches clearance to combustible material on all cabinet surfaces.
- Units with electric heat require a one inch clearance to combustible material for the first three feet of supply plenum and ductwork.
- All units require 24 inches minimum access to the front of the unit for service.
- These units may be installed in either ventilated or nonventilated spaces.

2.4 MODEL NUMBER EXPLANATION

FIGURE 2
MODEL NUMBER EXPLANATION

E L 3 T 18 12 S P A C T A ***



2.4A AVAILABLE MODELS

AVAILABLE MODELS AT J VOLTAGE

(-)L3T1812SPBCJA030
(-)L3T2212SPBCJA030
(-)L3T2812SPBCJA030
(-)L3T3212SPBCJA030
(-)L3T4217STACJA030
(-)L3T4817STACJA030
(-)L3T5517STACJA030
(-)L3T6518STACJA030

AVAILABLE MODELS AT T VOLTAGE

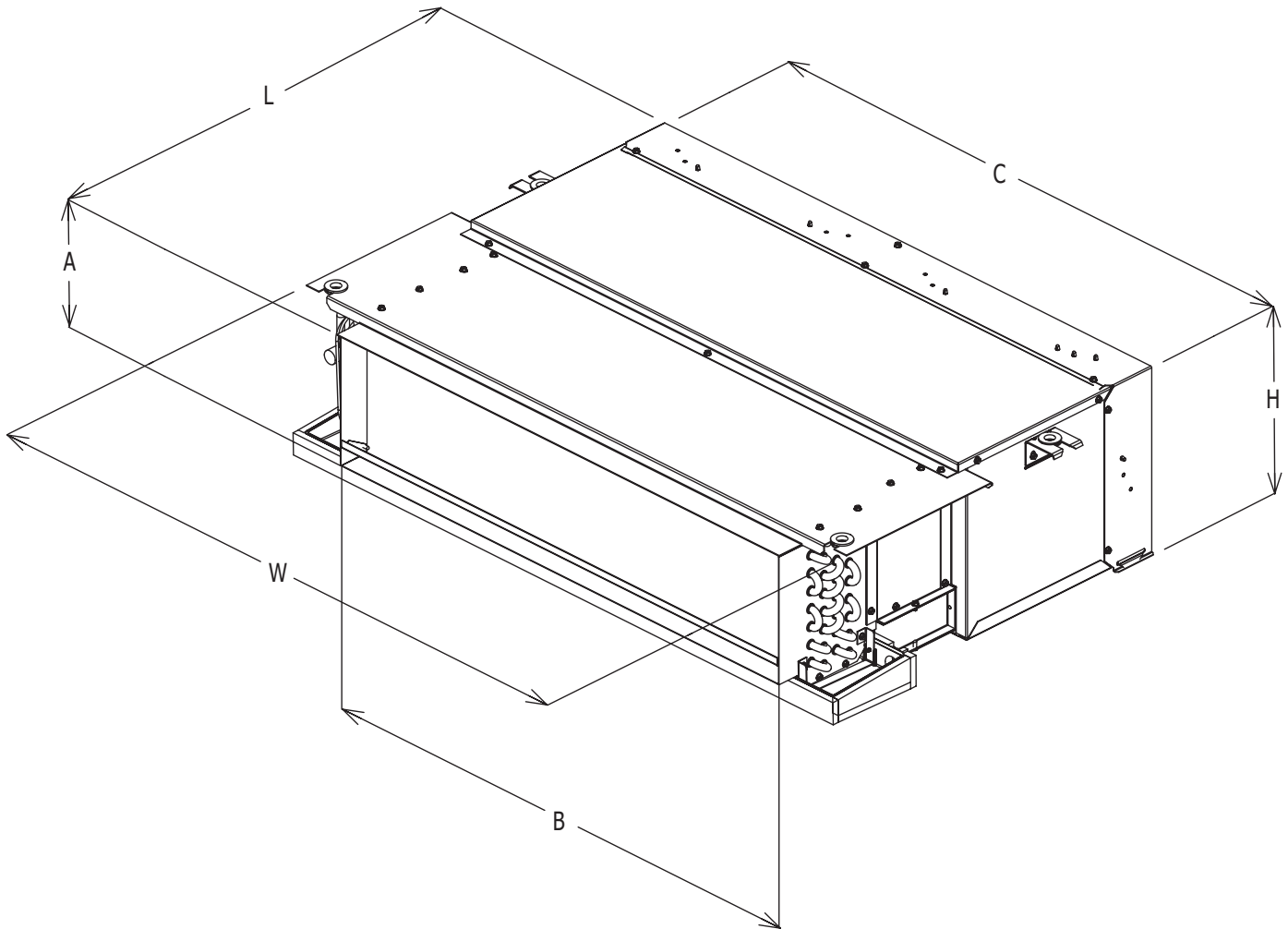
(-)L3T1812SPBCTA	(-)L3T4217STACTA
(-)L3T2412SPBCTA	(-)L3T4817STACTA
(-)L3T3012SPBCTA	(-)L3T6017STACTA
(-)L3T3612SPBCTA	(-)L3T6517STACTA

Notes:

- Supply circuit protective devices may be fuses or “HACR” type circuit breakers.
- Largest motor load is included in single circuit and multiple circuit 1.
- If non-standard fuse size is specified, use next size larger fuse size.
- The air handlers are shipped from the factory with the proper indoor coil installed, and cannot be ordered without a coil.

2.5 DIMENSIONS & WEIGHTS

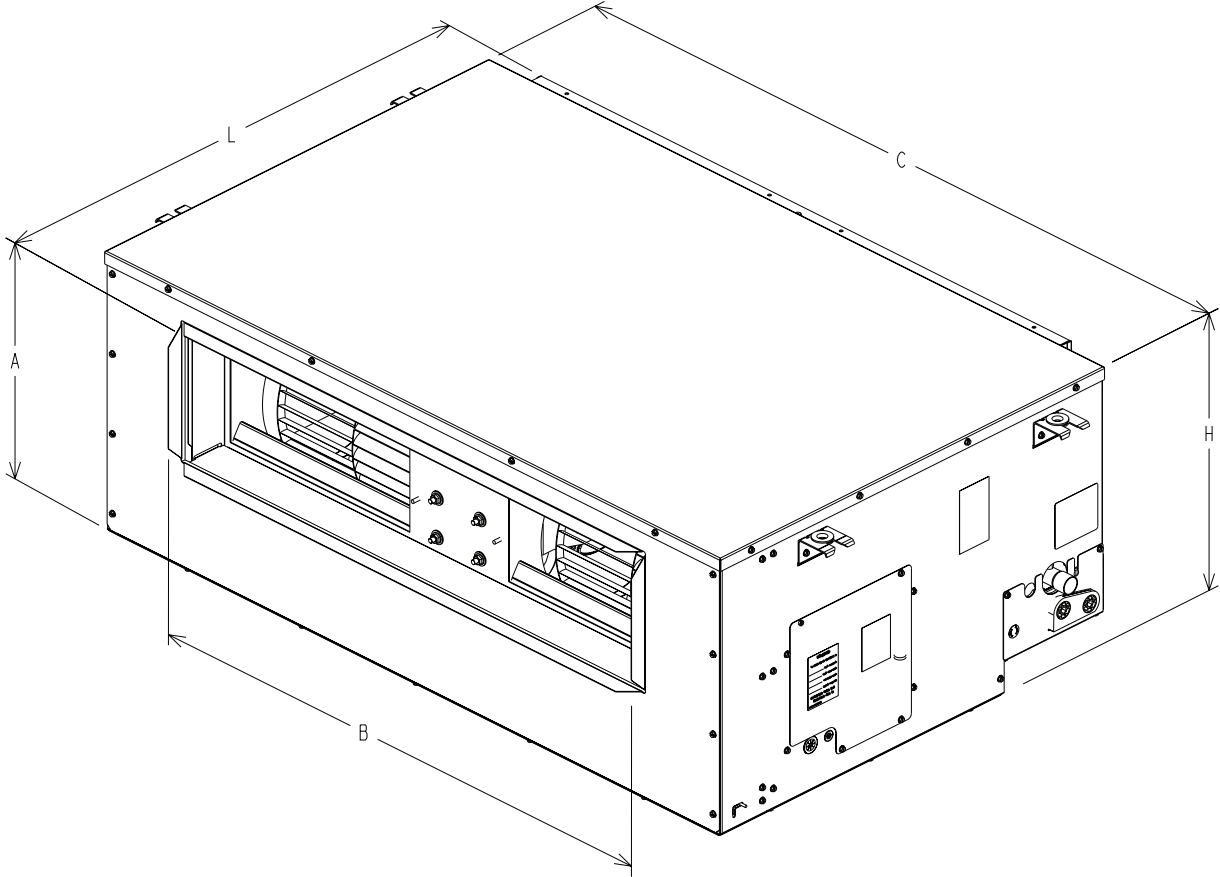
FIGURE 3
DIMENSIONS AND WEIGHTS (1.5 - 3 Ton Models)



MODEL (EL3T)	REFRIGERANT CONNECTIONS SWEAT (IN.) [mm] ID		UNIT HEIGHT IN. [mm]	UNIT WIDTH IN. [mm]	SUPPLY DUCT		RETURN DUCT C In. [mm]	UNIT WEIGHT/ SHIPPING WEIGHT LBS. [KG]
	LIQUID	VAPOR			A	B		
					In. [mm]	In. [mm]		
1812, 2212, 2412	3/8" [9.53]	3/4" [19.05]	10.5" [264.54]	37" [939.80]	7.25" [183.90]	30" [763.73]	33.5" [850.95]	78/84.62 [35.38/38.38]
2812, 3012, 3212, 3612	3/8" [9.53]	3/4" [19.05]	10.5" [264.54]	49" [1244.60]	7.25" [183.90]	42" [1066.80]	45.5" [1155.70]	98/104.60 [44.45/47.45]

2.5 DIMENSIONS & WEIGHTS

FIGURE 4
DIMENSIONS AND WEIGHTS (3.5 - 5.5 Ton Models)



MODEL (EL3T)	REFRIGERANT CONNECTIONS SWEAT IN. (mm) ID		UNIT HEIGHT IN (mm)	UNIT WIDTH IN. (mm)	SUPPLY DUCT		RETURN DUCT C IN. (mm)	UNIT WEIGHT/ SHIPPING WEIGHT LBS. [KG]
	LIQUID	VAPOR			A IN. (mm)	B IN. (mm)		
4217	3/8"[9.53]	3/4"[19.05]	16.07 [408.2]	47.1 [1196]	11.65 [296]	37.63 [956]	32.556	126.5/134.0 [57.38/60.78]
4817, 5517, 6017	3/8"[9.53]	3/4"[19.05]	16.07 [408.2]	60.2 [1530]	11.69 [297]	50.68 [1287]	34.090	147.5/155.0 [66.9/70.3]
6518	3/8"[9.53]	3/4"[19.05]	16.57 [420.9]	61.6 [1564]	12.99 [330]	52.38 [1330]	34.090	176.5/184.5 [80/83.6]

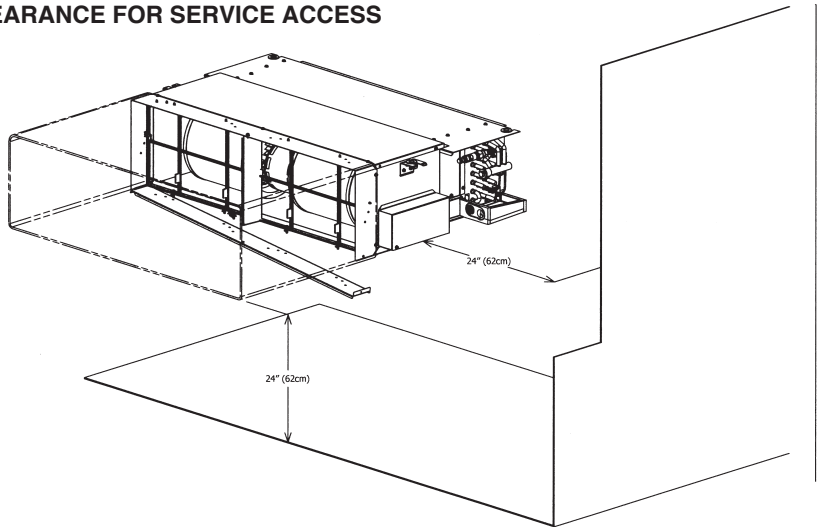
3.0 APPLICATIONS/INSTALLATION

3.1 HORIZONTAL RETURN (ALL MODELS)

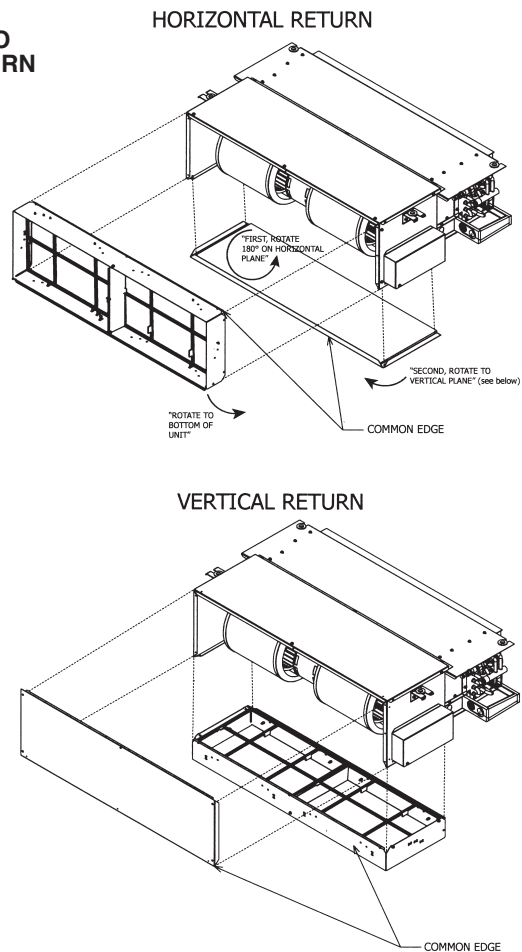
- Horizontal return is the factory configuration for all models (see Figure 3 & 4).
- A minimum of 24 inches (62 centimeters) clearance directly below the bottom control box is required for service access.
- A minimum of 24 inches (62 centimeters) clearance directly below the filter frame door is required to service the return air filters (see Figure 5).

Note: The clearances mentioned may be achieved by removing a ceiling panel or some other type of ceiling access panel beneath the unit.

**FIGURE 5
CLEARANCE FOR SERVICE ACCESS**



**FIGURE 6
CONVERSION TO
VERTICAL RETURN**



3.2 VERTICAL RETURN (1.5 - 3 Ton Models Only)

Conversion to Vertical Return: For ease of installation, it is preferred that the user convert the return air configuration prior to installing the air handler. A horizontal return unit may be converted to vertical return before or after installation. If such conversion is expected after installation, the user should consider that sufficient top, bottom and side clearance is required to remove screws fastening the filter frame and the bottom panel. See Figure 6 for conversion instructions.

- Allow a minimum of 24 inches (62 centimeters) bottom clearance for access to bottom control box.
- Allow a minimum of 24 inches (62 centimeters) rear clearance for filter access if return air is to be ducted.

Note: The clearances mentioned may be achieved by removing a ceiling panel or some other type of ceiling access panel beneath the unit.

3.3 INSTALLATION IN AN UNCONDITIONED SPACE

The exterior cabinet of an air handler has a greater risk of sweating when installed in an unconditioned space than when it is installed in the conditioned space. This is primarily due to the temperature of the conditioned air moving through the air handler and the air circulating around the unit where it is installed. For this reason, we recommend the following for all air handler applications, but special attention should be paid to those installed in unconditioned spaces:

- Duct sizing and airflow are critical and based on the equipment selected.
- Supply and return duct attachment: If other than the factory flanges are used, the attachment of ducting must be insulated and tight to prevent sweating.
- No perimeter supply flanges are provided. If a full perimeter supply duct is used, it is the responsibility of the installer to provide duct flanges as needed, to secure and seal the supply duct to prevent air leakage and the sweating that will result.
- All wire penetrations should be sealed. Take care not to damage, remove or compress insulation in those cases.
- In some cases, the entire air handler can be wrapped with insulation. This can be done as long as the unit is completely enclosed in insulation, sealed and service access is provided to prevent accumulation of moisture inside the insulation.
- As required, use a secondary pan that will protect the structure from excessive sweating or a restricted coil drain line.
- If a heater kit is installed, be sure the breaker or disconnect cover is sealed tightly to the door panel.

3.4 UNIT INSTALLATION

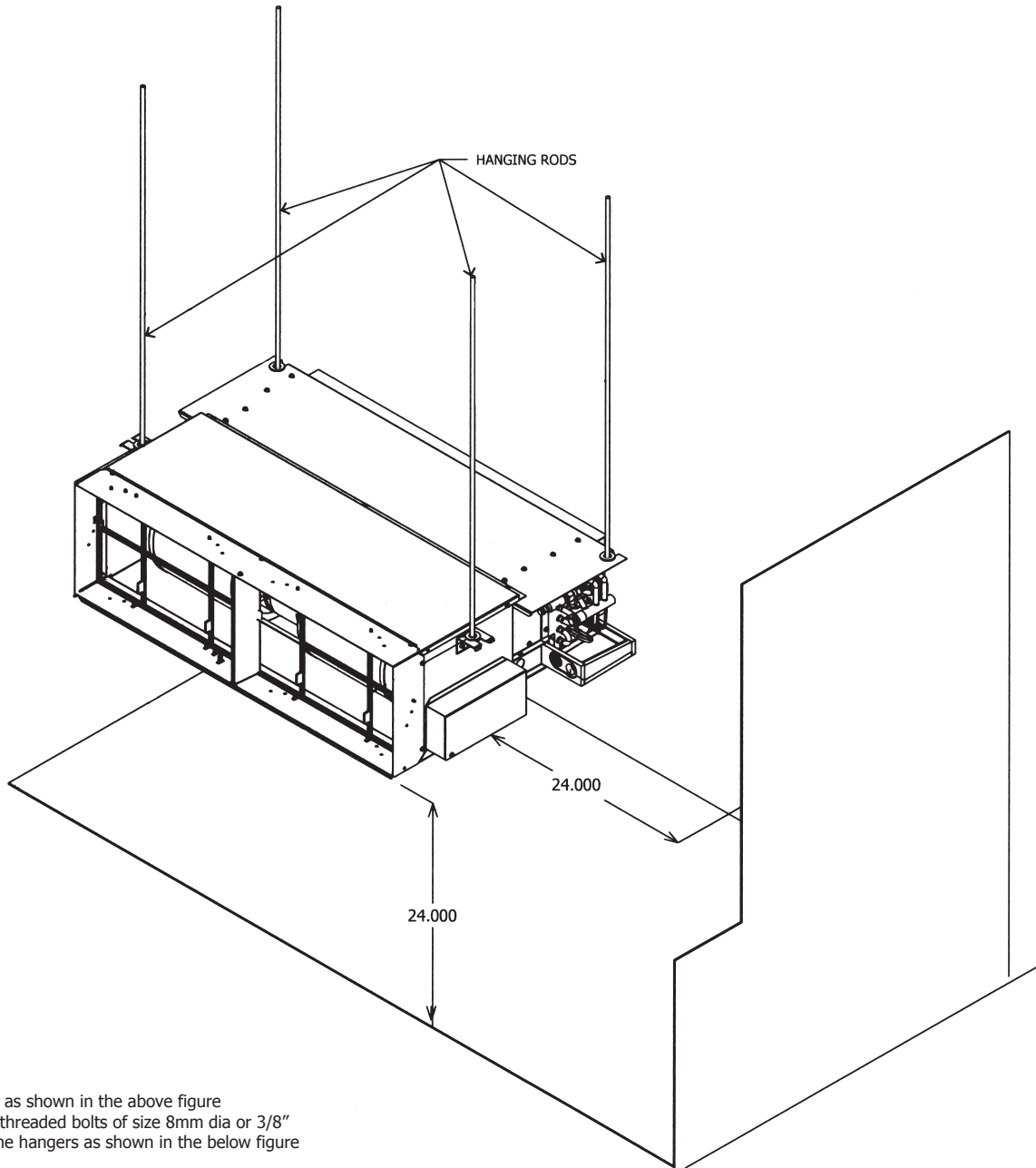
- Choose desired return air configuration and convert if necessary (refer to sections 3.1 and 3.2).
- Use template on the inside top piece of the box that the unit came in to space the hanging rods (use either 8mm or 5/8 inch diameter threaded rod).
- Ensure that the hanging rods are secure and will be sufficient to support the weight of the air handler.
- Locate the unit as shown in Figure 7 and hang on threaded rods.
- Lock the unit on the hangers using appropriate sized washers and nuts on top and bottom of the hanging brackets as shown in Figure 8.
- Ensure unit is level to allow for proper condensate drainage during operation.

3.5 FREE RETURN (NON-DUCTED) APPLICATIONS

The (-)L3T air handler series can be installed in non-ducted applications. The return plenum must be completely sealed except for the return grille so that all return air will be pulled from the conditioned space.

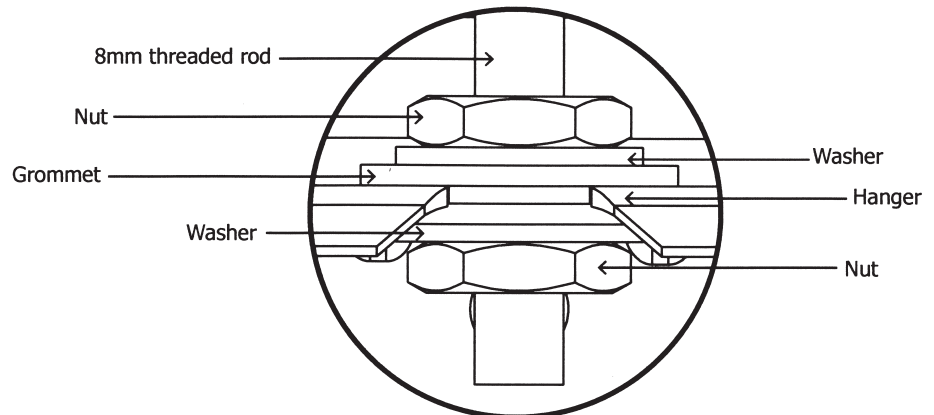
Note: For ducted applications refer to section 6.0 of this manual.

FIGURE 6
HANGING RODS POSITION



- *Locate the unit as shown in the above figure
- *Hang it on the threaded bolts of size 8mm dia or 3/8"
- *Lock the unit the hangers as shown in the below figure

FIGURE 8



4.0 ELECTRICAL WIRING

Field wiring must comply with any applicable national and local codes.

WARNING

Disconnect all power to unit before installing or servicing. More than one disconnect switch may be required to de-energize the equipment. Hazardous voltage can cause severe personal injury or death.

4.1 POWER WIRING

It is important that proper electrical power is available for connection to the unit model being installed. See the unit nameplate, wiring diagram and electrical data in the installation instructions.

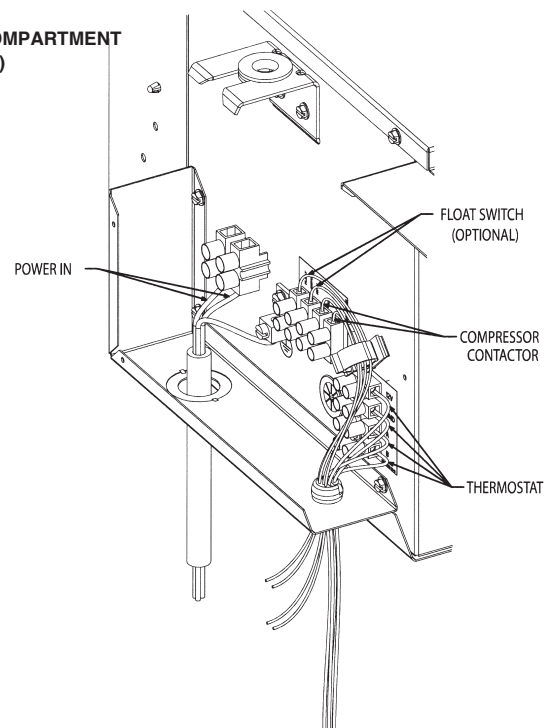
- If required, install a branch circuit disconnect of adequate size, located within sight of, and readily accessible to the unit.
- **IMPORTANT:** After the Electric Heater is installed, units may be equipped with one, two, or three 30/60 amp. circuit breakers. These breaker(s) protect the internal wiring in the event of a short circuit and serve as a disconnect. Circuit breakers installed within the unit do not provide over-current protection of the supply wiring and therefore may be sized larger than the branch circuit protection.
- Supply circuit power wiring must be 75°C minimum copper conductors only. See Electrical Data in this section for ampacity, wire size and circuit protector requirement. Supply circuit protective devices may be either fuses or “HACR” type circuit breakers.
- Power wiring is connected to the power terminal block in unit side control compartment.

4.2 CONTROL WIRING

IMPORTANT: Class 2 low voltage control wire should not be run in conduit with power wiring and must be separated from power wiring, unless class 1 wire of proper voltage rating is used.

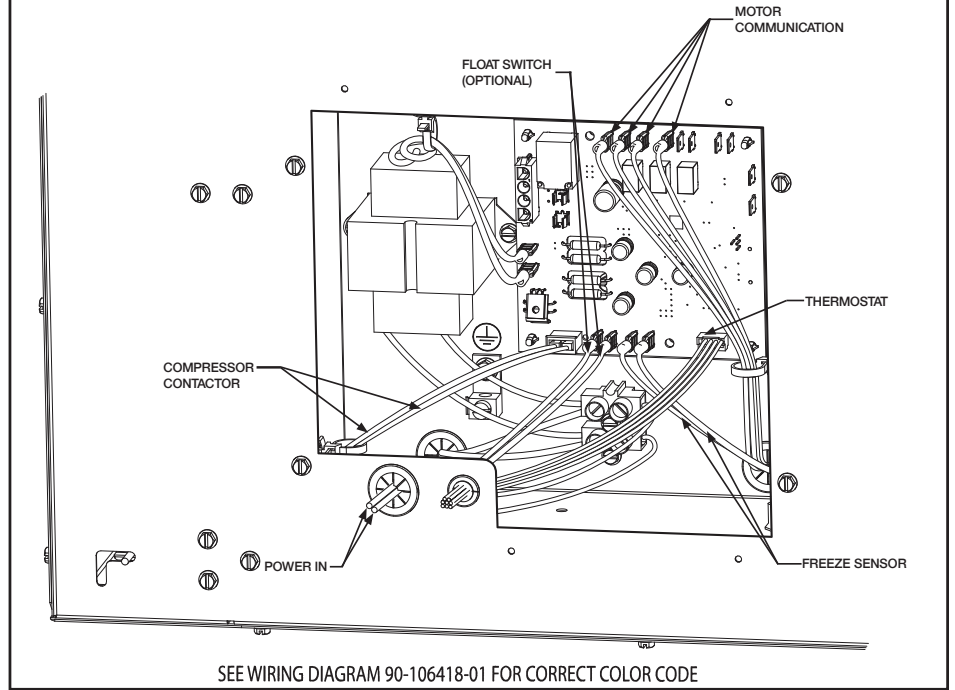
- Low voltage control wiring is color coded 20 Awg.
- Low voltage control connections are made to low voltage terminal block in unit side control compartment.
- See wiring diagrams attached to indoor and outdoor sections to be connected.
- Install plastic strain relief bushing in control box with thermostat wires as shown in Figure 9 (1.5 - 3 Ton Models Only).
- Make sure, after installation, separation of control wiring and power wiring has been maintained.

FIGURE 9
CONTROL BOX COMPARTMENT
(1.5 - 3 Ton Models)



SEE WIRING DIAGRAM 90-106418-01 FOR CORRECT COLOR CODE

FIGURE 10
CONTROL BOX COMPARTMENT
(3.5 - 5.5 Ton Models)



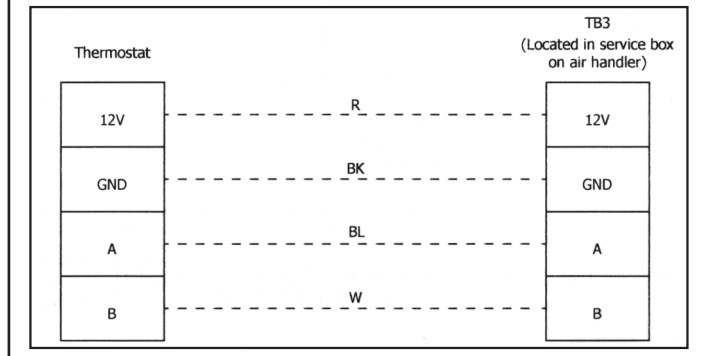
4.2B THERMOSTAT CONNECTIONS (-)L3T

NOTE: These low voltage application diagrams are generic. Your indoor/outdoor units may not have all the characteristics shown or may not wire exactly as shown. Refer to the diagrams and information sent with your indoor/outdoor sections.

WIRE COLOR CODE:

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

FIGURE 11
TYPICAL THERMOSTAT: STD COOLING



4.3 GROUNDING

- Grounding may be accomplished by grounding metal conduit when installed in accordance with electrical codes to the unit cabinet.
- Grounding may also be accomplished by attaching ground wire(s) to ground lug(s) provided in the unit wiring compartment.
- Ground lug(s) are located inside service access control box on side of unit.
- Use of multiple supply circuits require grounding of each circuit to lug(s) provided in unit.

⚠ WARNING

The unit must be permanently grounded. Failure to do so can result in electrical shock causing personal injury or death.

4.4 ELECTRICAL WIRING

POWER WIRING

- Field wiring must comply with the National Electrical Code (C.E.C. in Canada) and any applicable local ordinance.
- Supply wiring must be 75°C minimum copper conductors only.
- See electrical data for product Ampacity rating and Circuit Protector requirement.

GROUNDING

- This product must be sufficiently grounded in accordance with National Electrical Code (C.E.C. in Canada) and any applicable local ordinance.
- A grounding lug is provided.

4.5 ELECTRICAL DATA – BLOWER MOTOR ONLY – NO ELECTRIC HEAT (-)L3T

MODEL (-)L3T	VOLTAGE	PHASE*	FREQUENCY (HERTZ)	HP	RPM	SPEEDS	CIRCUIT AMPS	MINIMUM CIRCUIT AMPACITY	MAXIMUM CIRCUIT PROTECTOR
1812, 2212, 2412	208-240	1	50/60	1/3	300-1800	5	3.0	4	15
2812, 3012, 3212, 3612			50/60	1/2		5	4.1	5	15
4217, 4817			50/60	3/4		5	5.7	6	15
5517, 6017			50/60	1		5	7.0	8	15
6518			50/60	1		5	7.0	8	15

*Blower motors are all single phase motors.

4.6 COPPER WIRE SIZE - AWG. (3% VOLTAGE DROP)

SUPPLY LENGTH	WIRE FEET	SUPPLY CIRCUIT AMPACITY																		
		200 [61]	12	10	8	8	8	6	6	6	4	4	3	3	2	2	1	0	00	
		150 [46]	12	10	10	10	8	8	6	6	6	4	4	3	3	2	2	1	0	00
		100 [30]	14	12	10	10	8	8	6	6	6	4	4	3	3	2	1	0	00	
		50 [15]	14	12	10	10	8	8	6	6	6	4	4	3	3	2	1	0	00	
		15	20	25	30	35	40	45	50	60	70	80	90	100	110	125	150	175		

NOTE: WIRE BASED ON COPPER CONDUCTORS 75°C MINIMUM RATING. FOR MORE THAN 3 CONDUCTORS IN A RACEWAY OR CABLE, SEE N.E.C. FOR DERATING THE AMPACITY OF EACH CONDUCTOR.

4.7 HEATER KIT SUPPLEMENTAL INFORMATION

MFD: MO./YEAR 01/2006 AIR CONDITIONING DIVISION MADE IN THE U.S.A. / FRQ: MO./JANNE FAIT DANS L'USA

MODEL/MODELE # 208/240 PH/HZ 1/60 SERIAL/EN SERIE # M0106 38751 MOTOR HP./F.L.A. 1/2 4.1 / MOTEUR PSC/F.L.A.

ATTENTION: MARK HEATER INSTALLED / L'APPAREIL DE CHAUFFAGE DE MARQUE A INSTALLER

HEATER MODEL/MODELE D'APPAREIL DE CHAUFFAGE	TYPE SUPPLY CIRCUIT/FAPSE-LE CIRCUIT DE PROVISION	VOLTAGE/TENSION	PHASE	KW	HEATER AMPS/AMPLIS D'APPAREIL DE CHAUFFAGE	MOTOR AMPS/LES AMPLIS MOTEURS	MAXIMUM OVERCURRENT PROTECTION MAXIMUM DE OVERCURRENT	MINIMUM BRANCH CIRCUIT CAPACITY/AMPCAPACITE MINIMUM DE CIRCUIT DE BRANCHE
NO HEAT				0.0		4.1	25	5.2
RXBH-24A05J	SINGLE	208/240	1/60	3.6/4.8	17.3/20.0	6.0	30/35	30/33
RXBH-24A07J	SINGLE	208/240	1/60	5.4/7.2	26.0/30.0	6.0	40/45	40/45
RXBH-24A10J	SINGLE	208/240	1/60	7.2/9.6	34.6/40.0	6.0	60/60	51/58
RXBH-24A15J	SINGLE	208/240	1/60	10.8/14.4	51.9/60.0	6.0	80/90	73/83
RXBH-24A15J	MULTI CKT 1	208/240	1/60	3.6/4.8	17.3/20.0	6.0	30/35	30/33
RXBH-24A15J	MULTI CKT 2	208/240	1/60	7.2/9.6	34.6/40.0	0.0	45/50	44/50
RXBH-24A18J	SINGLE	208/240	1/60	12.8/17.0	61.2/70.8	6.0	90/100	84/96
RXBH-24A18J	MULTI CKT 1	208/240	1/60	6.4/8.5	30.8/35.4	6.0	50/60	46/52
RXBH-24A18J	MULTI CKT 2	208/240	1/60	6.4/8.5	30.8/35.4	0.0	40/45	39/45
RXBH-24A20J	SINGLE	208/240	1/60	14.4/19.2	69.2/80.0	6.0	100/110	94/108
RXBH-24A20J	MULTI CKT 1	208/240	1/60	7.2/9.6	34.6/40.0	6.0	60/60	51/58
RXBH-24A20J	MULTI CKT 2	208/240	1/60	7.2/9.6	34.6/40.0	0.0	45/50	44/50
RXBH-24A07C	SINGLE	208/240	3/60	5.4/7.2	15.0/17.3	6.0	30/30	27/30
RXBH-24A10C	SINGLE	208/240	3/60	7.2/9.6	20.0/23.1	6.0	35/40	33/37
RXBH-24A15C	SINGLE	208/240	3/60	10.8/14.4	30.0/34.6	6.0	45/60	45/51
RXBH-24A18C	SINGLE	208/240	3/60	12.4/17.0	35.6/41.0	6.0	60/60	52/59
RXBH-24A18C	MULTI CKT 1	208/240	3/60	6.4/8.5	17.8/20.5	6.0	30/35	30/34
RXBH-24A18C	MULTI CKT 2	208/240	3/60	6.4/8.5	17.8/20.5	0.0	25/30	23/26
RXBH-24A20C	SINGLE	208/240	3/60	14.2/19.2	40.0/46.2	6.0	60/70	58/66
RXBH-24A20C	MULTI CKT 1	208/240	3/60	7.2/9.6	20.0/23.1	6.0	35/40	33/37
RXBH-24A20C	MULTI CKT 2	208/240	3/60	7.2/9.6	20.0/23.1	0.0	25/30	25/29

S = SINGLE CIRCUIT/CIRCUIT SIMPLE M = MULTIPLE CIRCUIT/CIRCUIT MULTIPLE

INDOOR BLOWER MOTOR LOAD INCLUDED IN CIRCUIT # 1 OR TOTAL SUPPLY WIRE MUST BE RATED AT 75°C MINIMUM COPPER CONDUCTORS ONLY. TEST EXTERNAL STATIC RANGE 1 TO 5 IN. W.C. (HEAT PUMP & ELECTRIC HEAT).

UNITS WITH ELECTRIC HEATERS: CLEARANCE TO COMBUSTIBLE MATERIAL TO BE 0 IN. TO UNIT CASING AND 0 IN. TO PLENUM AND DUCT FOR FIRST 36 IN. MODELS HAVE INTEGRAL CIRCUIT BREAKERS WHICH PROVIDE SUPPLEMENTARY OVERCURRENT PROTECTION AND SERVE AS A MAINTENANCE "DISCONNECT". SUPPLY CIRCUIT NOT TO EXCEED 120 VOLTS TO GROUND ON SINGLE PHASE UNITS. REPLACE LINE SIDE BREAKER COVER(S) AFTER MAKING WIRING CONNECTIONS TO BREAKER(S). IF BLOWER-CONTROL ASSEMBLY REQUIRES REMOVAL, SEE "WARNING HAZARDOUS VOLTAGE".

CHARGEMENT DU MOTEUR SOUFFLEUR INTERNE INCLUS DANS LE CIRCUIT # 1 OU CAPACITE DU CABLAGE D'ALIMENTATION TOTAL DOIT ETRE DE 75C DU MINIMUM DE CONDUCTEURS DE CUIVRE SEULEMENT. TESTER L'INTERVALLE STATIQUE EXTERNE : 1 A 5 PO W.C. (THERMOPOMPE ET CHAUFFAGE ELECTRIQUE)

UNITES AVEC CHAUFFAGES ELECTRIQUES : LE DEGAGEMENT AUX MATIERES COMBUSTIBLES DOIT ETRE DE 0 po AU BOITIER DE L'UNITE ET DE 0 po AU PLENUM ET CONDUIT POUR LES 36 PREMIERS po. LES MODELES DISPOSENT DE DISJONCTEURS INTEGRÉS QUI FOURNISSENT UNE PROTECTION SUPPLEMENTAIRE DE SURINTENSITE DE COURANT ET SERVENT DE « SECTIONNEUR » D'ENTRETIEN. LE CIRCUIT D'ALIMENTATION NE DOIT PAS DEPASSER 120 VOLTS JUSQU'AU SOL SUR DES UNITES MONOPHASEES. REMPLACER LE(S) COUVERCLE(S) DU DISJONCTEUR DU CÔTÉ SECTEUR APRÈS AVOIR EFFECTUÉ LA CONNEXION DES CÂBLAGES AU(X) DISJONCTEUR(S). SI L'ASSEMBLAGE DE CONTRÔLE DU VENTILATEUR A BESOIN D'ÊTRE DÉASSEMBLÉ, CONSULTER "AVERTISSEMENT DE TENSION DANGEREUSE"

If a heater kit is listed both Single and Multi-circuit, the kit is shipped as a Multi-circuit and will require a single point kit.

Contractor should "mark or check" the left column for the kit installed.

These are the required maximum and minimum circuit breaker sizes for overcurrent protection and should not be confused with the size of the breakers installed in the heater kit.

Only listed kits can be applied

Heater Kit Supplemental Information: What allows the manufacturer to use standard Circuit Breakers up to 60 amps inside the air handler, when using an approved Heater Kit?

National Electric Code (Section 424-22b) and our UL requirements allow us to subdivide heating element circuits, of less than 48 amps, using breakers of not more than 60 amps and, additionally by, NEC 424-3b, a rating not less than 125 percent of the load and NEC 424-22c, which describes the supplementary overcurrent protection required to be factory-installed within, or on the heater. The breakers in the heater kit are not, and have never been, by NEC, intended to protect power wiring leading to the air handler unit. The breakers in the heating kit are for short circuit protection. All internal unit wiring, where the breakers apply, has been UL approved for short circuit protection.

Ampacity, (not breaker size), determines supply circuit wire size. The ampacity listed on the unit rating plate and the Maximum and Minimum circuit breaker size (noted above) or in the units specification sheet or installation instructions provides the information to properly select wire and circuit breaker/protector size. The National Electric Code (NEC) specifies that the supply or branch circuit must be protected at the source.

5.0 AIRFLOW PERFORMANCE

Airflow performance data is based on cooling performance with a coil and no filter in place. Select performance table for appropriate unit size, voltage and number of electric heaters to be used. Make sure external static applied to unit allows operation within the minimum and maximum limits shown in table below for both cooling and electric heat operation. For optimum blower performance, operate the unit in the .3 to .7 in W.C. external static range.

5.2 AIRFLOW PERFORMANCE DATA - EL3T----SPACTA (50HZ WITH CONSTANT TORQUE MOTOR)

Model No. EL3T	Tonnage Application	Blower Size/ Motor HP [W] # of Speeds	Speed Tap	Torque Value lb*in [N*m]	CFM [L/s] Air Delivery/RPM/Watts -- 220-230 Volts					
					External Static Pressure -- Inches W.C. [kPa]					
					0.1 [.02]	0.2 [.05]	0.3 [.07]	0.4 [.10]	0.5 [.12]	
1812SP	1.5 Ton	6x8 1/3HP [249] 5 Speed	1	2.6 [.294]	SCFM	350	276	199	-	-
					RPM	872	990	1118	-	-
					Watts	36.1	41.1	45.6	-	-
			2	3.4 [.384]	SCFM	450	380	306	-	-
					RPM	983	1070	1182	-	-
					Watts	52.3	55.2	59.5	-	-
			3	3.8 [.429]	SCFM	490	429	354	-	-
					RPM	1018	1114	1216	-	-
					Watts	57.8	63.7	69.2	-	-
			4	4.2 [.475]	SCFM	525	472	407	-	-
					RPM	1074	1150	1245	-	-
					Watts	68.2	72.8	78.6	-	-
			5	6.5 [.735]	SCFM	700	638	583	-	-
					RPM	1288	1348	1423	-	-
					Watts	119.8	125.5	130.3	-	-
2412SP	2 Ton	6x8 1/3HP [249] 5 Speed	1	3.1 [.350]	SCFM	400	316	237	-	-
					RPM	937	1061	1154	-	-
					Watts	45.3	50.8	55.6	-	-
			2	5.2 [.588]	SCFM	600	531	472	-	-
					RPM	1161	1240	1312	-	-
					Watts	88.9	93.8	99	-	-
			3	6 [.678]	SCFM	650	597.8	542	-	-
					RPM	1250	1306	1380	-	-
					Watts	109.2	112.3	118.2	-	-
			4	6.5 [.735]	SCFM	700	638	583	-	-
					RPM	1288	1348	1423	-	-
					Watts	119.8	125.5	130.3	-	-
			5	8.0 [.904]	SCFM	783	728	676	-	-
					RPM	1406	1466	1521	-	-
					Watts	162.6	166.8	175.7	-	-

NOTE:

All constant torque air handlers are shipped from the factory at speed taps 2, 3, & 4. Tap 1 should be used for extremely low static applications (0.1 inches W.C. or less). Tap 5 should be used for high static applications or to achieve rated capacity.

5.2 AIRFLOW PERFORMANCE DATA - EL3T----SPACTA (50HZ WITH CONSTANT TORQUE MOTOR) - continued

Model No. EL3T	Tonnage Application	Blower Size/ Motor HP [W] # of Speeds	Speed Tap	Torque Value lb*in [N*m]	CFM [L/s] Air Delivery/RPM/Watts -- 220-230 Volts					
					External Static Pressure -- Inches W.C. [kPa]					
					0.1 [.02]	0.2 [.05]	0.3 [.07]	0.4 [.10]	0.5 [.12]	
3012SP	2.5 Ton	7x8 1/2HP [373] 5 Speed	1	7.8 [.881]	SCFM	765	700	641	-	-
					RPM	1110	1188	1252	-	-
					Watts	126.2	134.9	139.9	-	-
			2	11.0 [1.243]	SCFM	958	900	837	-	-
					RPM	1300	1386	1412	-	-
					Watts	203.1	209.2	217.5	-	-
			3	12.3 [1.389]	SCFM	1021	960	907	-	-
					RPM	1358	1413	1468	-	-
					Watts	233.4	242.5	250.6	-	-
			4	13.5 [1.526]	SCFM	1077	1020	961	-	-
					RPM	1412	1464	1522	-	-
					Watts	265.1	273.6	283.8	-	-
			5	15.0 [1.694]	SCFM	1174.8	1132.4	1088.9	1049.5	1007.1
					RPM	1412	1468	1520	1561	1615
					Watts	302.4	313.3	320.1	329.9	336.2
3612SP	3 Ton	7x8 1/2HP [373] 5 Speed	1	7.8 [.881]	SCFM	765	700	641	573	520
					RPM	1110	1188	1252	1332	1402
					Watts	126.2	134.9	139.9	147.1	154.4
			2	11.0 [1.243]	SCFM	958	900	837	786	732
					RPM	1300	1386	1412	1468	1531
					Watts	203.1	209.2	217.5	225.7	232.8
			3	12.3 [1.389]	SCFM	1021	960	907	851	798
					RPM	1358	1413	1468	1526	1575
					Watts	233.4	242.5	250.6	258.9	266.7
			4	13.5 [1.526]	SCFM	1077	1020	961	911	862
					RPM	1412	1464	1522	1568	1626
					Watts	265.1	273.6	283.8	289.1	298.9
			5	15.0 [1.694]	SCFM	1174.8	1132.4	1088.9	1049.5	1007.1
					RPM	1412	1468	1520	1561	1615
					Watts	302.4	313.3	320.1	329.9	336.2

NOTE:

All constant torque air handlers are shipped from the factory at speed taps 2, 3, & 4. Tap 1 should be used for extremely low static applications (0.1 inches W.C. or less). Tap 5 should be used for high static applications or to achieve rated capacity.

5.1 AIRFLOW PERFORMANCE DATA - EL3T----SPACJA (60HZ WITH CONSTANT TORQUE MOTOR)

Model No. EL3T	Tonnage Application	Blower Size/ Motor HP [W] # of Speeds	Speed Tap	Torque Value lb*in [N*m]	CFM [L/s] Air Delivery/RPM/Watts -- 220-230 Volts					
					External Static Pressure -- Inches W.C. [kPa]					
					0.1 [.02]	0.2 [.05]	0.3 [.07]	0.4 [.10]	0.5 [.12]	
1812SP	1.5 Ton	6x8 1/3HP [249] 5 Speed	1	2.6 [.294]	SCFM	350	276	199	-	-
					RPM	872	990	1118	-	-
					Watts	36.1	41.1	45.6	-	-
			2	3.4 [.384]	SCFM	450	380	306	-	-
					RPM	983	1070	1182	-	-
					Watts	52.3	55.2	59.5	-	-
			3	3.8 [.429]	SCFM	490	429	354	-	-
					RPM	1018	1114	1216	-	-
					Watts	57.8	63.7	69.2	-	-
			4	4.2 [.475]	SCFM	525	472	407	-	-
					RPM	1074	1150	1245	-	-
					Watts	68.2	72.8	78.6	-	-
			5	4.6 [.519]	SCFM	570	507	451	-	-
					RPM	1122	1194	1274	-	-
					Watts	77	81.1	86.8	-	-
2212SP	2 Ton	6x8 1/3HP [249] 5 Speed	1	3.1 [.350]	SCFM	400	316	237	-	-
					RPM	937	1061	1154	-	-
					Watts	45.3	50.8	55.6	-	-
			2	5.2 [.588]	SCFM	600	531	472	-	-
					RPM	1161	1240	1312	-	-
					Watts	88.9	93.8	99	-	-
			3	6.0 [.678]	SCFM	650	597.8	542	-	-
					RPM	1250	1306	1380	-	-
					Watts	109.2	112.3	118.2	-	-
			4	6.5 [.735]	SCFM	700	638	583	-	-
					RPM	1288	1348	1423	-	-
					Watts	119.8	125.5	130.3	-	-
			5	7.0 [.791]	SCFM	733	681	622.8	-	-
					RPM	1340	1400	1454	-	-
					Watts	134.6	138.7	143.8	-	-

NOTE:

All constant torque air handlers are shipped from the factory at speed taps 2, 3, & 4. Tap 1 should be used for extremely low static applications (0.1 inches W.C. or less). Tap 5 should be used for high static applications or to achieve rated capacity.

5.3 AIRFLOW PERFORMANCE DATA - EL3T----SPACJA (60HZ WITH CONSTANT TORQUE MOTOR) - continued

Model No. EL3T	Tonnage Application	Blower Size/ Motor HP [W] # of Speeds	Speed Tap	Torque Value lb*in [N*m]		CFM [L/s] Air Delivery/RPM/Watts -- 220-230 Volts				
						External Static Pressure -- Inches W.C. [kPa]				
						0.1 [.02]	0.2 [.05]	0.3 [.07]	0.4 [.10]	0.5 [.12]
2812SP	2.5 Ton	7x8 1/2HP [373] 5 Speed	1	6.1 [.689]	SCFM	650	579.5	518	-	-
					RPM	996	1075	1156	-	-
					Watts	88.9	96	102.6	-	-
			2	7.9 [.893]	SCFM	750	673	604	-	-
					RPM	1116	1190	1244	-	-
					Watts	127.2	134.5	140.3	-	-
			3	8.8 [.994]	SCFM	800	725	656	-	-
					RPM	1165	1225	1280	-	-
					Watts	146.3	152.6	160.3	-	-
			4	10.2 [1.153]	SCFM	875	803	738	-	-
					RPM	1235	1282	1347	-	-
					Watts	177.1	184.2	191.3	-	-
			5	11.4 [1.288]	SCFM	939	863	796	-	-
					RPM	1293	1393	1400	-	-
					Watts	207.2	215.1	220.4	-	-
3212SP	3 Ton	7x8 1/2HP [373] 5 Speed	1	7.8 [.881]	SCFM	765	700	641	573	520
					RPM	1110	1188	1252	1332	1402
					Watts	126.2	134.9	139.9	147.1	154.4
			2	11.0 [1.243]	SCFM	958	900	837	786	732
					RPM	1300	1386	1412	1468	1531
					Watts	203.1	209.2	217.5	225.7	232.8
			3	11.4 [1.288]	SCFM	984	928	859	822	751
					RPM	1326	1399	1436	1498	1556
					Watts	218.6	222.5	233.4	239.2	241.3
			4	12.3 [1.389]	SCFM	1021	960	907	851	798
					RPM	1358	1413	1468	1526	1575
					Watts	233.4	242.5	250.6	258.9	266.7
			5	13.5 [1.526]	SCFM	1077	1020	961	911	862
					RPM	1412	1464	1522	1568	1626
					Watts	265.1	273.6	283.8	289.1	298.9

NOTE:

All constant torque air handlers are shipped from the factory at speed taps 2, 3, & 4. Tap 1 should be used for extremely low static applications (0.1 inches W.C. or less). Tap 5 should be used for high static applications or to achieve rated capacity.

5.1 AIRFLOW PERFORMANCE DATA -EL3T----SPACTA (50 HZ WITH CONSTANT TORQUE MOTOR) - continued

Model No. EL3T	Tonnage Application	Blower size/ Motor HP [W] # of Speeds	Speed Tap	Torque Value lb*in [N*m]		CFM [L/s] Air Delivery/RPM/Watts -- 220-230 Volts						
						External Static Pressure -- Inches W.C. [kPa]						
						0.2 [.05]	0.3 [.07]	0.4 [.10]	0.5 [.12]	0.6 [.15]	0.7 [.17]	0.8 [.19]
4217ST	3.5 Ton	10X10 3/4HP [559] 5 Speed	1	12.1	SCFM	850	776	700	621	554	487	415
					RPM	840	880	925	964	1010	1060	1095
					Watts	136.5	143	150	156	162	168	174
			2	14.8	SCFM	1000	928	857	783	713	648	584
					RPM	901	936	957	1013	1050	1088	1130
					Watts	178	185	192	198	205	211	218
			3	17.3	SCFM	1130	1054	984	918	846	779	718
					RPM	953	990	1023	1060	1094	1130	1160
					Watts	221	227	234	242	247	255	260
			4	20.5	SCFM	1280	1208	1130	1067	1002	940	874
					RPM	1011	1042	1070	1100	1135	1168	1210
					Watts	273	280	287	294	303	310	321
			5	23.8	SCFM	1420	1352	1281	1208	1148	1090	1030
					RPM	1073	1100	1130	1153	1182	1211	1243
					Watts	336	344	351	358	366	374	382
4817ST	4 Ton	10x10 3/4HP [559] 5 Speed	1	14.9	SCFM	1045	897	776	672	573	481	400
					RPM	763	820	882	938	985	1044	1110
					Watts	127	136	138	145	156	165	171
			2	17.9	SCFM	1200	1107	960	845	746	650	570
					RPM	807	856	920	970	1016	1066	1120
					Watts	160	168	174	186	192	197	209
			3	20	SCFM	1300	1212	1070	966	860	767	680
					RPM	840	886	940	992	1045	1088	1133
					Watts	184	193	205	215	220	230	239
			4	23.5	SCFM	1450	1370	1286	1142	1047	950	863
					RPM	890	930	976	1028	1076	1120	1167
					Watts	228	240	250	263	273	280	290
			5	27.9	SCFM	1609	1535	1463	1385	1243	1155	1062
					RPM	950	990	1030	1068	1122	1163	1203
					Watts	291	300	312	325	333	347	355

NOTE:

All Constant torque air handlers re shipped from the factory taps 2,3 & 4. Tap 1 should be used for extremely low static applications (0.1 inches W.C or less). Tap 5 should be used for high static applications or to achieve rated capacity.

5.1 AIRFLOW PERFORMANCE DATA -EL3T----SPACTA (50 HZ WITH CONSTANT TORQUE MOTOR) - continued

Model No. EL3T	Tonnage Application	Blower size/ Motor HP [W] # of Speeds	Speed Tap	Torque Value lb*in [N*m]	CFM [L/s] Air Delivery/RPM/Watts -- 220-230 Volts							
					External Static Pressure -- Inches W.C. [kPa]							
					0.2 [.05]	0.3 [.07]	0.4 [.10]	0.5 [.12]	0.6 [.15]	0.7 [.17]	0.8 [.19]	
6017ST	5 Ton	10x10 1 HP [746] 5 speed	1	25	SCFM	1411	1349	1262	1171	1106	1047	989
					RPM	951	988	1078	1108	1129	1172	1211
					Watts	350	365	390	400	406	425	446
			2	30	SCFM	1593	1537	1473	1372	1298	1240	1179
					RPM	1104	1041	1082	1130	1176	1210	1244
					Watts	440	453	467	486	503	514	526
			3	35	SCFM	1750	1690	1630	1568	1454	1390	1324
					RPM	1067	1097	1130	1183	1238	1262	1286
					Watts	542	555	570	592	609	619	634
			4	40	SCFM	1873	1815	1774	1724	1659	1556	1456
					RPM	1132	1151	1180	1212	1250	1310	1357
					Watts	650	659	675	685	703	736	757
			5	45	SCFM	2015	1952	1900	1856	1807	1742	1650
					RPM	1180	1207	1229	1262	1287	1330	1375
					Watts	756	770	780	796	814	838	862
6518ST	5.5 Ton	10x10 1 HP [746] 5 speed	1	20.3	SCFM	1614	1563	1515	1462	1407	1358	1312
					RPM	951	917	956	983	1020	1053	1088
					Watts	250	210	237	266	294	321	349
			2	27.5	SCFM	1862	1804	1748	1687	1623	1567	1514
					RPM	1004	997	1033	1058	1092	1123	1155
					Watts	391	373	395	419	440	462	486
			3	31.1	SCFM	1986	1925	1864	1799	1731	1671	1614
					RPM	1031	1037	1072	1096	1128	1158	1189
					Watts	462	454	474	495	514	533	555
			4	38.3	SCFM	2235	2165	2097	2024	1948	1880	1816
					RPM	1084	1118	1150	1171	1200	1228	1256
					Watts	603	618	632	647	660	675	691
			5	45	SCFM	2483	2405	2330	2249	2164	2089	2018
					RPM	1133	1160	1186	1211	1242	1271	1304
					Watts	736	751	763	775	790	802	819

NOTE:

All Constant torque air handlers re shipped from the factory taps 2,3 & 4. Tap 1 should be used for extremely low static applications (0.1 inches W.C or less). Tap 5 should be used for high static applications or to achieve rated capacity.

5.1 AIRFLOW PERFORMANCE DATA -EL3T----SPACTA (60 HZ WITH CONSTANT TORQUE MOTOR) - continued

Model No. EL3T	Tonnage Application	Blower size/ Motor HP [W] # of Speeds	Speed Tap	Torque Value lb*in [N*m]		CFM [L/s] Air Delivery/RPM/Watts -- 220-230 Volts						
						External Static Pressure -- Inches W.C. [kPa]						
						0.2 [.05]	0.3 [.07]	0.4 [.10]	0.5 [.12]	0.6 [.15]	0.7 [.17]	0.8 [.19]
4217ST	3.5 Ton	10x10 3/4 HP [559] 5 speed	1	9.1	SCFM	850	776	700	621	554	487	415
					RPM	840	880	925	964	1010	1060	1095
					Watts	136.5	143	150	156	162	168	174
			2	11.1	SCFM	1000	928	857	783	713	648	584
					RPM	901	936	975	1013	1050	1088	1130
					Watts	178	185	192	198	205	211	218
			3	13	SCFM	1130	1054	984	918	846	779	718
					RPM	953	990	1023	1060	1094	1130	1160
					Watts	221	227	234	242	247	255	260
			4	15.4	SCFM	1280	1208	1130	1067	1002	940	874
					RPM	1011	1042	1070	1100	1135	1168	1210
					Watts	273	280	287	294	303	310	321
			5	17.9	SCFM	1420	1352	1281	1208	1148	1090	1030
					RPM	1073	1100	1130	1153	1182	1211	1243
					Watts	336	344	351	358	366	374	382
4817ST	4 Ton	10x10 3/4 HP [559] 5 speed	1	14.5	SCFM	1045	900	778	670	567	480	393
					RPM	750	808	870	920	975	1034	1098
					Watts	113	123	128	136	142	155	160
			2	17.8	SCFM	1200	1110	970	850	750	653	570
					RPM	798	847	904	960	1010	1057	1110
					Watts	146	156	165	175	182	192	200
			3	20	SCFM	1300	1218	1110	977	872	776	688
					RPM	830	880	930	983	1030	1080	1122
					Watts	175	184	193	202	214	218	230
			4	23.5	SCFM	1450	1363	1291	1161	1054	932	870
					RPM	885	923	973	1021	1065	1110	1164
					Watts	218	226	238	248.6	260	270.5	283
			5	26.7	SCFM	1590	1513	1425	1330	1210	1118	1024
					RPM	923	960	995	1045	1092	1134	1175
					Watts	260	270	285	293	300	320	330

NOTE:

All Constant torque air handlers re shipped from the factory taps 2,3 & 4. Tap 1 should be used for extremely low static applications (0.1 inches W.C or less). Tap 5 should be used for high static applications or to achieve rated capacity.

5.1 AIRFLOW PERFORMANCE DATA -EL3T----SPACJA (60 HZ WITH CONSTANT TORQUE MOTOR) - continued

Model No. EL3T	Tonnage Application	Blower size/ Motor HP [W] # of Speeds	Speed Tap	Torque Value lb*in [N*m]	CFM [L/s] Air Delivery/RPM/Watts -- 220-230 Volts							
					External Static Pressure -- Inches W.C. [kPa]							
					0.2 [.05]	0.3 [.07]	0.4 [.10]	0.5 [.12]	0.6 [.15]	0.7 [.17]	0.8 [.19]	
5517ST	5 Ton	10x10 1 HP [746] 5 speed	1	13.9	SCFM	1236	1112	1105	1029	974	930	884
					RPM	926	886	914	948	840	1060	1085
					Watts	209	252	274	308	335	356	385
			2	15.9	SCFM	1318	1186	1178	1098	1038	992	943
					RPM	953	911	938	971	862	1081	1105
					Watts	266	303	324	354	379	398	424
			3	20.1	SCFM	1483	1334	1326	1235	1168	1116	1061
					RPM	1007	960	988	1017	1090	1123	1144
					Watts	379	403	424	447	467	482	504
			4	22.5	SCFM	1593	1537	1473	1372	1298	1240	1179
					RPM	1104	1041	1082	1130	1176	1210	1244
					Watts	440	453	467	486	503	514	526
			5	25.2	SCFM	1689	1531	1498	1442	1326	1319	1221
					RPM	1121	1063	1106	1151	1204	1229	1263
					Watts	502	513	494	526	556	576	578
6518ST	5.5 Ton	10x10 1 HP [746] 5 speed	1	18.2	SCFM	1535	1485	1440	1390	1340	1290	1250
					RPM	953	902	940	970	1005	1040	1075
					Watts	208	166	195	225	252	280	309
			2	20.3	SCFM	1614	1563	1515	1462	1407	1358	1312
					RPM	951	917	956	983	1020	1053	1088
					Watts	250	210	237	266	294	321	349
			3	23.1	SCFM	1705	1655	1600	1545	1490	1435	1388
					RPM	972	950	990	1015	1050	1080	1115
					Watts	304	275	300	326	350	375	402
			4	27.5	SCFM	1862	1804	1748	1687	1623	1567	1514
					RPM	1004	997	1033	1058	1092	1123	1155
					Watts	391	373	395	419	440	462	486
			5	33	SCFM	2050	1990	1930	1860	1790	1730	1670
					RPM	1045	1050	1085	1109	1140	1170	1205
					Watts	501	494	512	532	550	570	590

NOTE:

All Constant torque air handlers re shipped from the factory taps 2,3 & 4. Tap 1 should be used for extremely low static applications (0.1 inches W.C or less). Tap 5 should be used for high static applications or to achieve rated capacity.

6.0 DUCTWORK

Field ductwork must comply with the National Fire Protection Association NFPA 90A, NFPA 90B and any applicable local ordinance.

WARNING

Do not, under any circumstances, connect return ductwork to any other heat producing device such as fireplace insert, stove, etc. Unauthorized use of such devices may result in fire, carbon monoxide poisoning, explosion, personal injury or property damage.

Sheet metal ductwork run in unconditioned spaces must be insulated and covered with a vapor barrier. Fibrous ductwork may be used if constructed and installed in accordance with SMACNA Construction Standard on Fibrous Glass Ducts. Ductwork must comply with National Fire Protection Association as tested by U/L Standard 181 for Class I Air Ducts. Check local codes for requirements on ductwork and insulation.

- Duct system must be designed within the range of external static pressure the unit is designed to operate against. It is important that the system airflow be adequate. Make sure supply and return ductwork, grills, special filters, accessories, etc. are accounted for in total resistance. See airflow performance tables in this manual.

- Design the duct system in accordance with “ACCA” Manual “D” Design for Residential Winter and Summer Air Conditioning and Equipment Selection. Latest editions are available from: “ACCA” Air Conditioning Contractors of America, 1513 16th Street, N.W., Washington, D.C. 20036. If duct system incorporates **flexible air duct**, be sure **pressure drop** information (straight length plus all turns) shown in “ACCA” Manual “D” is accounted for in system.
 - Supply plenum is attached to the duct flanges supplied with the unit. Attach flanges around the supply opening.
- IMPORTANT:** If an elbow is included in the plenum close to the unit, it must not be smaller than the dimensions of the supply duct flange on the unit.
- **IMPORTANT:** Take special precaution to ensure that any screw used to secure ductwork to the unit do not enter the control box or any areas where power wiring is located. Drills or sharp screw points can damage insulation on wires located inside the unit.
 - Secure the supply and return ductwork to the unit flanges, using proper fasteners for the type of duct used and tape the duct-to-unit joint as required to prevent air leaks.

FIGURE 12
DRAIN & REFRIGERANT CONNECTIONS WITH DIMENSIONS (1.5 - 3 Ton Models)

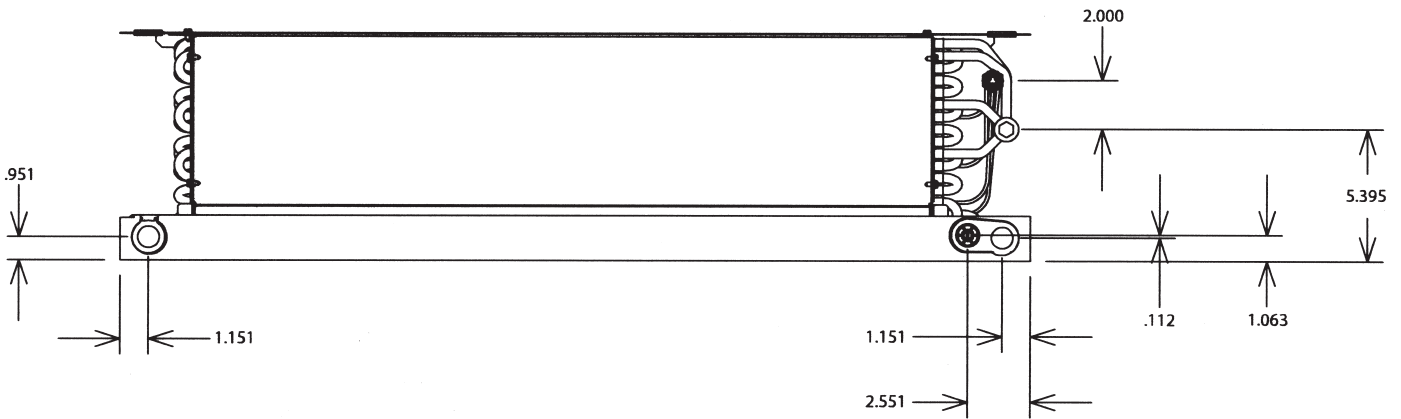


FIGURE 13
DRAIN & REFRIGERANT CONNECTIONS WITH DIMENSIONS (3.5 - 5.5 Ton Models)

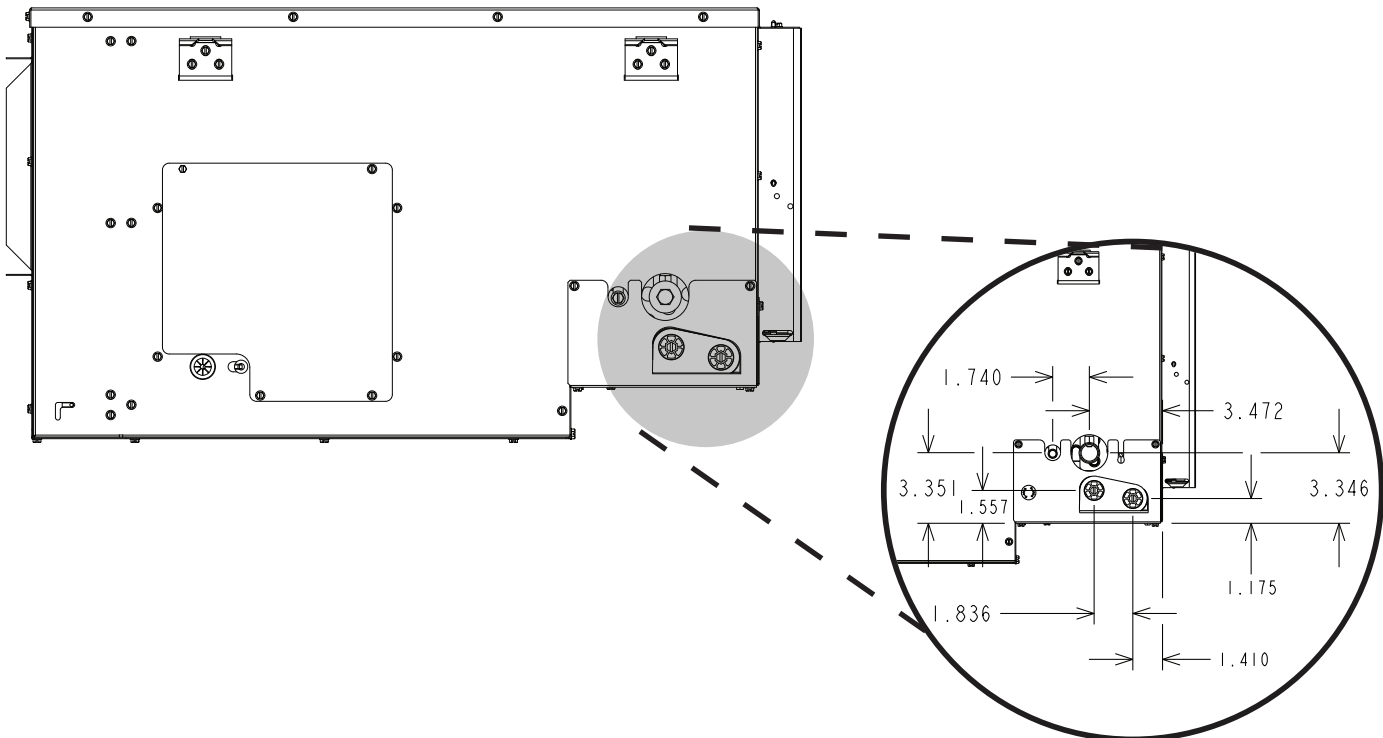


FIGURE 14
BULB LOCATION

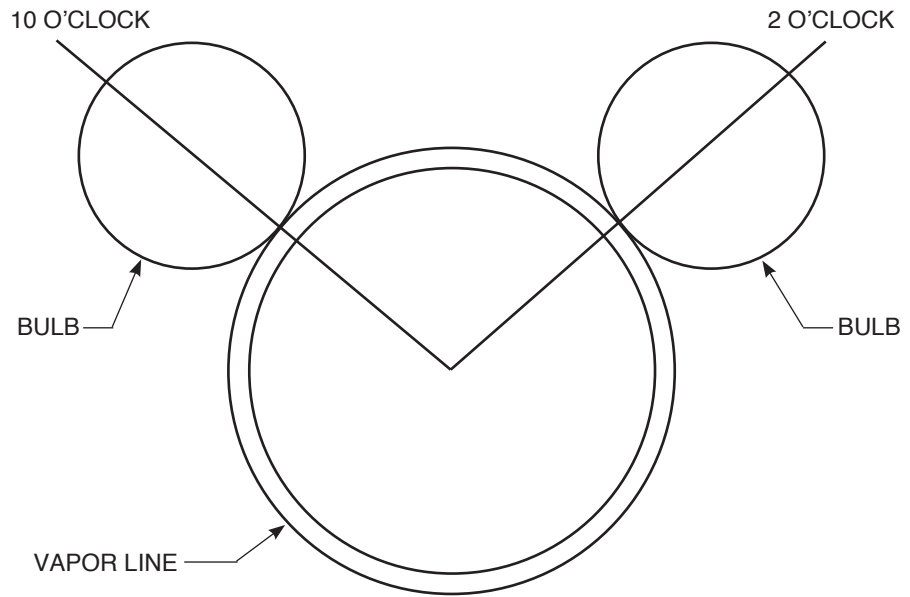
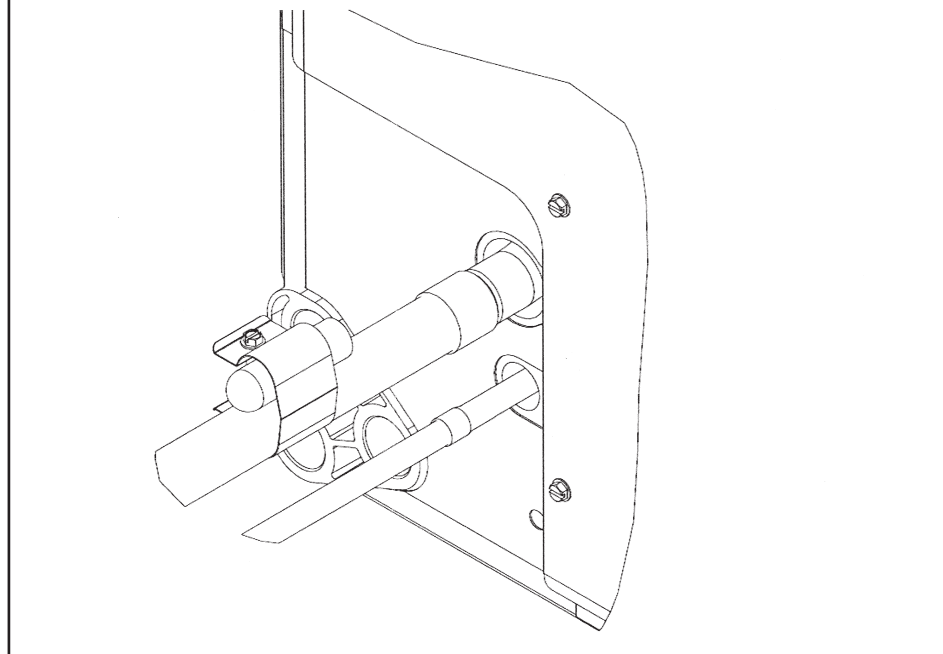


FIGURE 15
BULB LOCATION



7.0 REFRIGERANT CONNECTIONS

Keep the coil connections sealed until refrigerant connections are to be made. See the Installation Instructions for the outdoor unit for details on line sizing, tubing installation, and charging information.

Coil is shipped with a low (5 - 10 PSIG) pressure charge of dry nitrogen. Evacuate the system before charging with refrigerant. If it is found that the coil no longer contains a nitrogen charge due to an apparent leak, contact your local distributor.

Install refrigerant tubing so that it does not block service access to the unit.

Nitrogen should flow through the refrigerant lines while brazing.

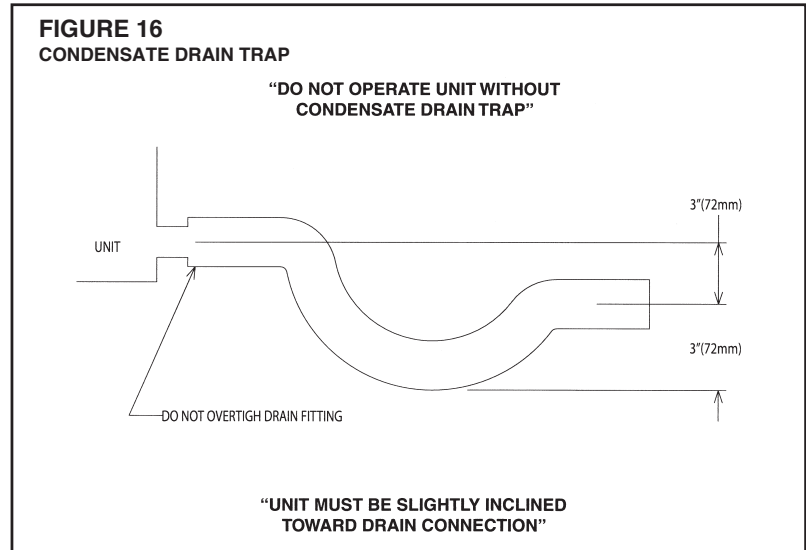
Make sure to protect TXV, copper to aluminum joint (if applicable), and service valves from overheating by use of wet rag or some type of shielding. Double tip torches are not recommended.

Use a brazing shield to protect the cabinet's paint from being damaged by torch flames. After the refrigerant connections are made, seal the gap around the connections with pressure sensitive gasket. If necessary, cut the gasket into two pieces for a better seal.

7.1 TEV SENSING BULB (IF APPLICABLE)

IMPORTANT: DO NOT perform any soldering with the TEV bulb attached to any line. After soldering operations have been completed, clamp the TEV bulb securely on the suction line at the 10 to 2 o'clock position with the strap provided in the parts bag. Insulate the TEV sensing bulb and suction line with the provided pressure sensitive insulation (size 4" x 7") and secure with provided wire ties.

IMPORTANT: TEV sensing bulb should be located on a horizontal section of suction line, just outside of coil box.



7.2 CONDENSATE DRAIN TUBING

Consult local codes or ordinances for specific requirements.

IMPORTANT: When making drain fitting connections to the drain pan, use a thin layer of Teflon paste, silicone or Teflon tape and install hand tight.

IMPORTANT: When making drain fitting connections to drain pan, do not overtighten. Overtightening fittings can split pipe connections on the drain pan.

- Install drain lines so they do not block service access to front of the unit. Minimum clearance of 24 inches is required for filter, coil or blower removal and service access.
- Make sure unit is level or pitched slightly toward primary drain connection so that water will drain completely from the pan.
- Do not reduce drain line size less than connection size provided on condensate drain pan.
- All drain lines must be pitched downward away from the unit a minimum of 10.5 mm per meter of line to ensure proper drainage.
- Do not connect condensate drain line to a closed or open sewer pipe. Run condensate to an open drain or outdoors.
- The drain line should be insulated where necessary to prevent sweating and damage due to condensate forming on the outside surface of the line.
- Make provisions for disconnecting and cleaning of the primary drain line should it become necessary. Install a 7.62 cm trap in the primary drain line as close to the unit as possible. Make sure that the top of the trap is below connection to the drain pan to allow complete drainage of pan.
- Auxiliary drain line should be run to a place where it will be noticeable if it becomes operational. Occupant should be warned that a problem exists if water should begin running from the auxiliary drain line.
- Plug the unused drain connection with the plugs provided in the parts bag, using a thin layer of teflon paste, silicone or teflon tape to form a water tight seal.
- Test condensate drain pan and drain line after installation is complete. Pour water into drain pan, enough to fill drain trap and line. Check to make sure drain pan is draining completely, no leaks are found in drain line fittings, and water is draining from the termination of the primary drain line.

8.0 AIR FILTER (factory-installed)

- External filter or other means of filtration is required. Units should be sized for a maximum of 91 m/min. air velocity or that recommended for the type filter installed.

Filter application and placement are critical to airflow, which may affect the heating and cooling system performance. Reduced airflow can shorten the life of the system's major components, such as motor, limits, elements, heat relays, evaporator coil or compressor. Consequently, we recommend that the return air duct system have only one filter location. For systems with a return air filter grill or multiple filter grills, can have a filter installed at each of the return air openings.

If high efficiency filters or electronic air cleaners are used in the system, it is important that the airflow is not reduced to maximize system performance and life. Always verify that the system's airflow is not impaired by the filtering system that has been installed, by performing a temperature rise and temperature drop test.

IMPORTANT: DO NOT DOUBLE FILTER THE RETURN AIR DUCT SYSTEM. DO NOT FILTER THE SUPPLY AIR DUCT SYSTEM.

WARNING

Do not operate the system without filters. A portion of the dust entrained in the air may temporarily lodge in the duct runs and at the supply registers. Any circulated dust particles could be heated and charred by contact with the air handler elements. This residue could soil ceilings, walls, drapes, carpets and other articles in the house.

Soot damage may occur with filters in place, when certain types of candles, oil lamps or standing pilots are burned.

9.0 SEQUENCE OF OPERATION

9.1 COOLING (COOLING ONLY)

- When the thermostat "calls for cooling," the circuit between R and G is completed, causing the blower relay (BR) to energize. The N.O. contacts will close, causing the indoor blower motor (IBM) to operate. The circuit between R and Y is also completed: This circuit closes the contactor (CC) in the outdoor unit starting the compressor (COMP) and outdoor fan motor (OFM).

9.2 HEATING (ELECTRIC HEAT ONLY)

- When the thermostat "calls for heat," the circuit between R and W is completed, and the heater sequencer (HR₁) is energized. The heating elements (HE) and the indoor blower motor (IBM) will come on. Units with a second heater sequencer (HR₂) can be connected with the first sequencer (HR₁) to W on the thermostat sub-base or connected to a second stage W₂ on the sub-base.

9.3 BLOWER TIME DELAY (HEATING OR COOLING)

- All models are equipped with a blower time delay (BTD) in lieu of a blower relay (BR) (see wiring diagram). The blower will run for 30 seconds after the blower time delay (BTD) is de-energized.

9.4 ROOM THERMOSTAT (ANTICIPATOR SETTING)

See instructions with outdoor section, condensing unit or heat pump for recommended room thermostats.

- On units with one electric heat sequencer (HR₁) (see wiring diagram on unit), heat anticipator setting should be .16.
- On units with two electric heat sequencers (HR₁ & HR₂) (see wiring diagram on unit), heat anticipator setting should be .32 if both are connected to same stage on thermostat. Setting should be .16 if (HR₁ & HR₂) are connected to separate stages.

NOTE: Some thermostats contain a fixed, non-adjustable heat anticipator. Adjustment is not permitted.

- The thermostat should be mounted 4 to 5 feet above the floor on an inside wall of the

living room or a hallway that has good air circulation from the other rooms being controlled by the thermostat. It is essential that there be free air circulation at the location of the same average temperature as other rooms being controlled. Movement of air should not be obstructed by furniture, doors, draperies, etc. The thermostat should not be mounted where it will be affected by drafts, hot or cold water pipes or air ducts in walls, radiant heat from fireplace, lamps, the sun, T.V. or an outside wall. See instruction sheet packaged with thermostat for mounting and installation instructions.

10.0 CALCULATIONS

10.1 CALCULATING TEMPERATURE RISE

- The formula for calculating air temperature rise for electric resistance heat is:

$$\text{Temperature Rise } ^\circ\text{F} = \frac{3.16 \times \text{Watts}}{\text{CFM}}$$

Where: 3.16 = Constant, CFM = Airflow

10.2 CALCULATING BTUH HEATING CAPACITY

- The formula for calculating BTUH heating capacity for electric resistance heat is:

$$\text{BTUH Heating} = \text{Watts} \times 3.412$$

Where: 1 kW = 1000 Watts, 3.412 = Btuh/Watt

10.3 CALCULATING AIRFLOW CFM

- The formula for calculating airflow using temperature rise and heating BTUH for units with electric resistance heat is:

$$\text{CFM} = \frac{\text{Heating BTUH}}{1.08 \times \text{Temp. Rise}}$$

10.4 CALCULATING CORRECTION FACTOR

- For correction of electric heat output (kW or BTUH) or temperature rise at voltages other than rated voltage multiply by the following correction factor:

$$\text{Correction Factor} = \frac{\text{Applied Voltage}^2}{\text{Rated Voltage}^2}$$

11.0 PRE-START CHECKLIST

PRE-START CHECKLIST	
<input type="checkbox"/> YES <input type="checkbox"/> NO	Is unit properly located, level, secure and service-able?
<input type="checkbox"/> YES <input type="checkbox"/> NO	Has auxiliary pan been provided under the unit with separate drain? (Units installed above a finished ceiling).
<input type="checkbox"/> YES <input type="checkbox"/> NO	Is condensate line properly sized, run, trapped, pitched and tested?
<input type="checkbox"/> YES <input type="checkbox"/> NO	Is ductwork correctly sized, run, taped and insulated?
<input type="checkbox"/> YES <input type="checkbox"/> NO	Have all cabinet openings and wiring been sealed with caulking?
<input type="checkbox"/> YES <input type="checkbox"/> NO	Is the filter clean, in place and of adequate size?
<input type="checkbox"/> YES <input type="checkbox"/> NO	Is the wiring tight, correct and to the wiring diagram?
<input type="checkbox"/> YES <input type="checkbox"/> NO	Is the unit properly grounded and protected (fused)?
<input type="checkbox"/> YES <input type="checkbox"/> NO	Is the thermostat heat anticipator been set properly?
<input type="checkbox"/> YES <input type="checkbox"/> NO	Is the unit circuit breaker(s) rotated properly "on" up - "off" down?
<input type="checkbox"/> YES <input type="checkbox"/> NO	Are the unit circuit breaker(s) line lug cover(s) in place?
<input type="checkbox"/> YES <input type="checkbox"/> NO	Are all access panels in place and secure?
Refer to outdoor unit installation instructions for system start-up instructions and refrigerant charging instructions.	

12.0 MAINTENANCE

For continuing high performance, and to minimize possible equipment failure, it is essential that periodic maintenance be performed on this equipment. Consult your local dealer as to the proper frequency of maintenance and the availability of a maintenance contract.

WARNING

Units with circuit breaker(s) meet requirements as a service disconnect switch, however, if access is required to the line side (covered) of the circuit breaker, this side of the breaker(s) will be energized with the breaker(s) de-energized. Contact with the line side can cause electrical shock resulting in personal injury or death.

IMPORTANT: Before performing any service or maintenance procedures, see the "Safety Information" section at the front of this manual.

12.1 AIR FILTER (FACTORY-INSTALLED)

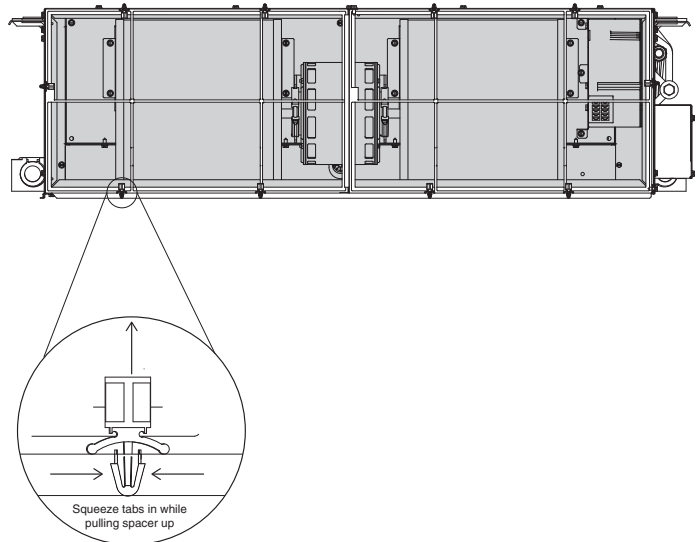
Check the system filter every ninety days or as often as found to be necessary and if obstructed, clean or replace at once.

FILTER REMOVAL

For non-ducted applications where the filters are exposed as shown in Figure 17, remove the white plastic filter retention clips so that the filters can be removed without the need of any tools (see Figure 17 on how to remove the filter retention clips).

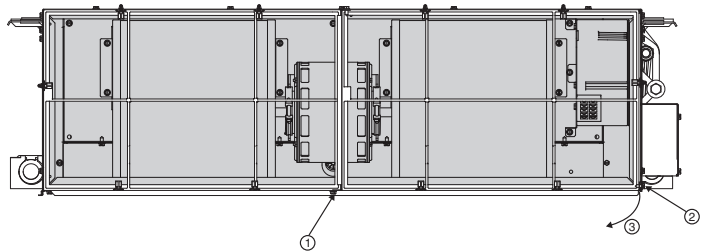
IMPORTANT: Do not operate the system without a filter in place.

FIGURE 17
FILTER REMOVAL



For ducted applications where the filters are not exposed, it will be necessary to remove the filter access panel on the bottom of the unit (or back of the unit for vertical return applications). In order to remove this panel you will need to remove the 2 screws shown in Figure 18, then the panel will be free to swing open. At this point, the filters can be removed by sliding them out the bottom of the unit (or back of the unit for vertical return applications). The 3-step process to remove the filter access panel is illustrated in Figure 18.

FIGURE 18
FILTER REMOVAL



12.2 INDOOR COIL - DRAIN PAN - DRAIN LINE

Inspect the indoor coil once each year for cleanliness and clean as necessary. In some cases, it may be necessary to remove the filter and check the return side of the coil with a mirror and flashlight.

IMPORTANT: Do not use caustic household drain cleaners, such as bleach, in the condensate pan or near the indoor coil. Drain cleaners will quickly damage the indoor coil.

12.3 BLOWER MOTOR AND WHEEL

Inspect the blower motor and wheel for cleanliness. It should be several years before it would become necessary to clean the blower motor and wheel.

- If it becomes necessary to remove the blower assembly from the unit, see instructions on removal and disassembly of motor, blower and heater parts.
- The blower motor and wheel may be cleaned by using a vacuum with a soft brush attachment. Remove grease with a mild solvent such as hot water and detergent. Be careful not to disturb the balance weights (clips) on the blower wheel blades. Do not drop or bend wheel as balance will be affected.

12.4 LUBRICATION

The blower motor sleeve bearings are pre-lubricated by the motor manufacturer and do not have oiling ports. Motor should be run for an indefinite period of time without additional lubrication.

12.5 BLOWER ASSEMBLY REMOVAL AND REPLACEMENT (1.5-3 TON MODELS)

Removing the blower assembly is not required for normal service and maintenance. Removal is necessary for replacement of defective parts such as motor, blower wheel. After extended use, removal of the blower assembly may become necessary for a thorough cleaning of the blower motor and wheel.

WARNING

If removal of the blower assembly is required, all disconnect switches supplying power to the equipment must be de-energized and locked (if not in sight of unit) so the field power wires can be safely removed from the blower assembly. Failure to do so can cause electrical shock resulting in personal injury or death.

- Mark field power supply wiring (for replacement) attached to terminal block in service compartment on side of unit. Remove wiring from terminal block.
- Mark low voltage control wiring (for replacement) attached to terminal block in service compartment on side of unit. Remove wiring from terminal block.
- Refer to Figure 6 for removal of filter frame and bottom panel.
- Once filter frame and bottom panel are removed, disconnect power and control wiring from motor control module.
- Remove bottom control box partition and then the blower deck assembly (see Figure 19).
- In order to remove the right side blower housing, the motor control bracket will need to first be removed (see Figure 21).
- Once the motor control bracket is out of the way, loosen the set screw(s) holding the blower wheel(s) to the motor shaft, remove the screws fastening the blower housing(s) to the blower deck, then slide the blower assemblies off of the motor shaft (see Figure 22).
- Reassemble in reverse order.

12.6 BLOWER ASSEMBLY REMOVAL AND REPLACEMENT (3.5-5.5 TON MODELS)

- Mark field power supply wiring (for replacement) attached to terminal block in control box on side of unit. Remove wiring from terminal block.
- Refer to figure 20 for removal of bottom panel.
- Once bottom panel is removed, disconnect power and control wiring from motor control module.
- Refer again to figure 20 for removal of blower deck.
- In order to remove the right side blower housing, the motor control bracket will need to first be removed (Figure 21).
- Once the motor control bracket is out of the way, loosen the set screw(s) holding the blower wheel(s) to the motor shaft, remove the screws fastening the blower housing(s) to the blower deck, then slide the blower assemblies off of the motor shaft (see Figure 22).
- Reassemble in reverse order.

12.7 MOTOR REPLACEMENT

With the blower assembly removed, the indoor blower motor can be removed and replaced using the following procedure:

- Loosen the 2 screws located on the left and right side motor bearing clamps until the clamps can be removed and the motor as well (see Figure 23).
- Reassemble in reverse order.

12.8 BLOWER WHEEL REPLACEMENT

With the blower assembly removed and the motor assembly removed (see above instructions), remove the set screw(s) located at the blower wheel hub(s), then slide the blower wheel(s) off of the motor shaft.

FIGURE 19
BLOWER DECK REMOVAL
(1.5 - 3 Ton Models)

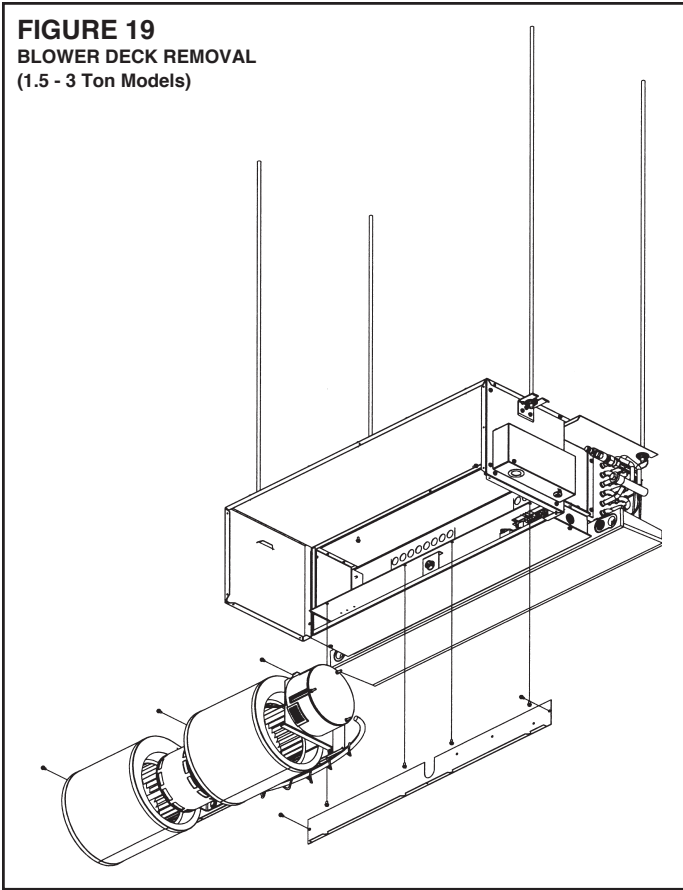


FIGURE 20

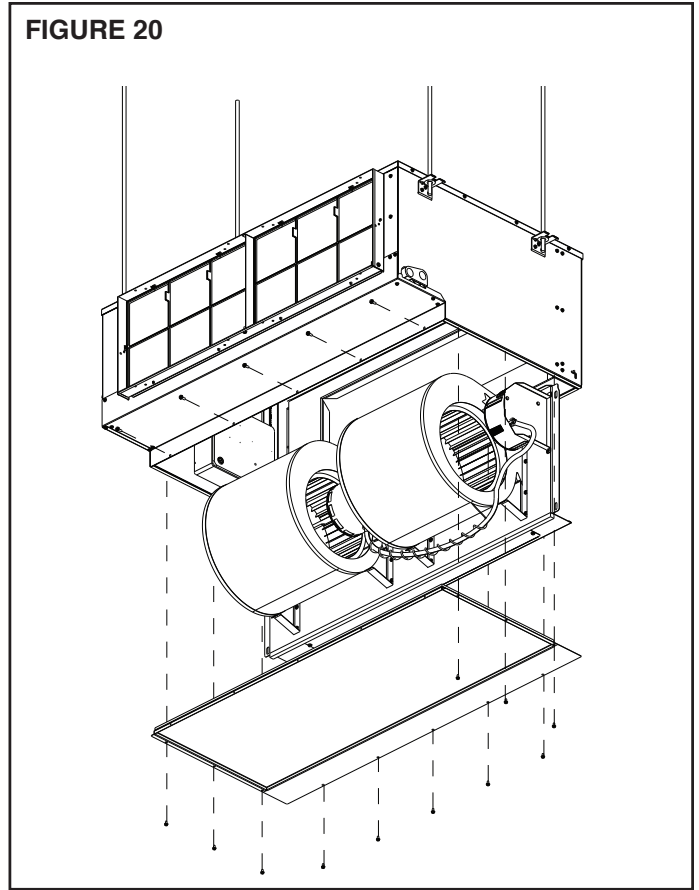


FIGURE 21

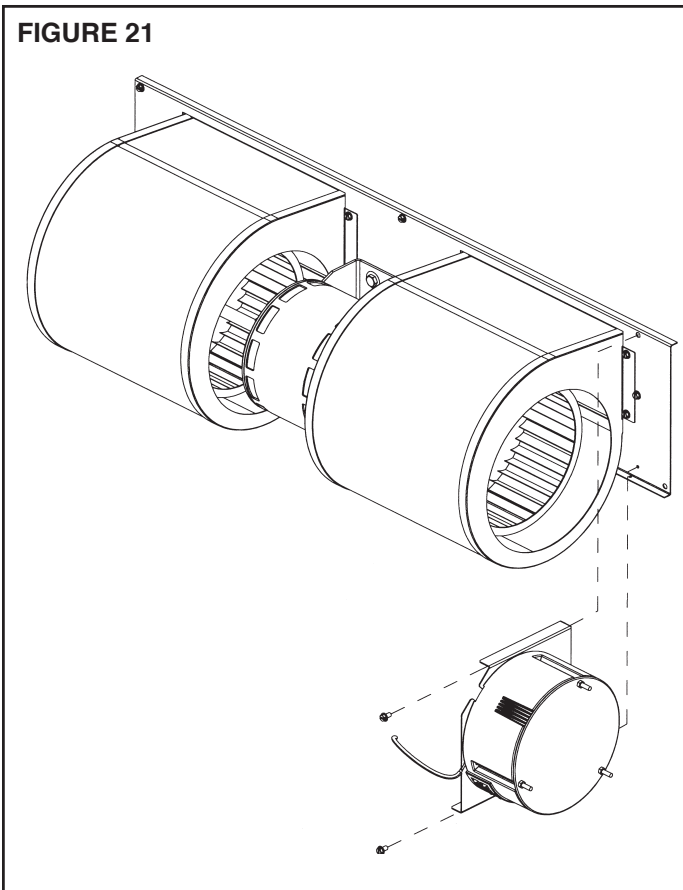


FIGURE 22

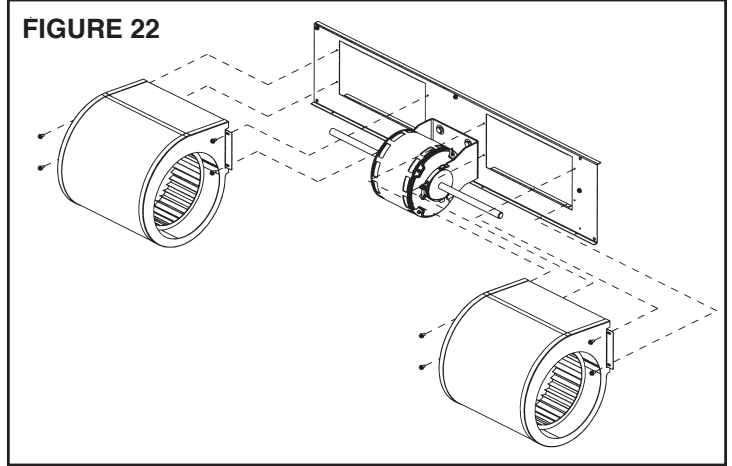
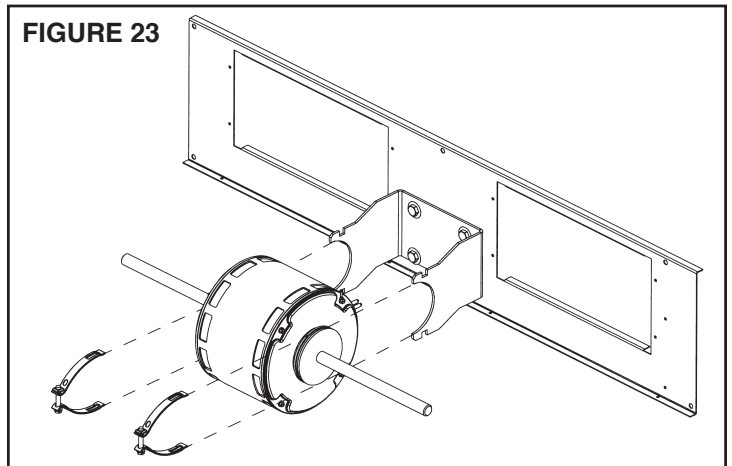


FIGURE 23



13.0 REPLACEMENT PARTS

Any replacement part used to replace parts originally supplied on equipment must be the same as or an approved alternate to the original part supplied. The manufacturer will not be responsible for replacement parts not designed to physically fit or operate within the design parameters the original parts were selected for.

These parts include but are not limited to: Circuit breakers, heater controls, heater limit controls, heater elements, motor, motor capacitor, blower relay, control transformer, blower wheel, filter, indoor coil and sheet metal parts.

When ordering replacement parts, it is necessary to order by part number and include with the order the complete model number and serial number from the unit data plate. (See parts list for unit component part numbers).

14.0 ACCESSORIES-KITS-PARTS

- Electric Heater (Field Installed Kits – 60hz models only)

Model Number	Available Electric Heater Model Numbers RXHN-
(-)L3T1812SPBCJA030	1111N03J, 1110N05J, 1110N06J, 1111N08J
(-)L3T2212SPBCJA030	1111N03J, 1110N05J, 1110N06J, 1111N08J, 0100N10J
(-)L3T2812SPBCJA030	1111N03J, 1110N05J, 1110N06J, 1111N08J, 0100N10J
(-)L3T3212SPBCJA030	1111N03J, 0001N05J, 0001N06J, 1111N08J, 0001N10J

15.1 WIRING DIAGRAMS FOR 1.5-3 TON MODELS

WIRING DIAGRAM

SCHEMATIC DIAGRAM

WIRING DIAGRAM

SPEED TAP TABLE

TONS	LO SPEED	MED SPEED	HIGH SPEED
1.5	T1	T3	T5
2.0	T1	T3	T5
2.5	T1	T3	T5
3.0	T1	T3	T5
3.5	T1	T3	T5
4.0	T1	T3	T5
5.0	T1	T3	T5
6.0	T1	T3	T5

OPTIONAL ELECTRIC HEAT DIAGRAM

COMPONENT CODES

COMPRESSOR / CONTACTOR
 CONTROL TRANSFORMER
 DISCONNECT, NON-FUSED
 FUSE LINK
 GROUND
 HEATING ELEMENT
 LIMIT CONTROL
 TERMINAL BLOCK (HI VOLT)
 TERMINAL BLOCK (LO VOLT)
 TIME DELAY CONTROL
 INDOOR BLOWER MOTOR CONTROL

WIRE COLOR CODE

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

ELECTRICAL AIR HANDLER

230 V SelectTech MOTOR

NOTES

- CONNECT SUPPLY WIRING FOR VOLTAGE, PHASE AND HERTZ SHOWN ON RATING PLATE.
- SUPPLY WIRE MUST BE RATED AT 75°C MIN. SEE INSTRUCTIONS FOR SIZE.
- CT FACTORY WIRED FOR 240 VOLTS. MOVE WIRES FROM 240V TO 208V FOR 208 V OPERATION.
- CONTROL WIRING TO THERMOSTAT.
- FOR USE WITH COPPER CONDUCTORS ONLY.
- THE DOTTED BOX NEAR THE DRAWING TITLE REPRESENTS A .25 X .25 2D DATA MATRIX. SEE ADS 104669-01 FOR DATA MATRIX SPECS.

WIRING INFORMATION

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

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

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

CONTROL BOX

ELECTRICAL WIRING DIAGRAM

APPROVED: _____
 MODELED: CRS
 CHECKED: _____
 DATE: 10-11-16
 ORIGINAL REF. CASE NO.: NL-101
 PART NO.: 90-106418-01
 REV: 05

15.1 WIRING DIAGRAMS FOR 3.5-5.5 TON MODELS

