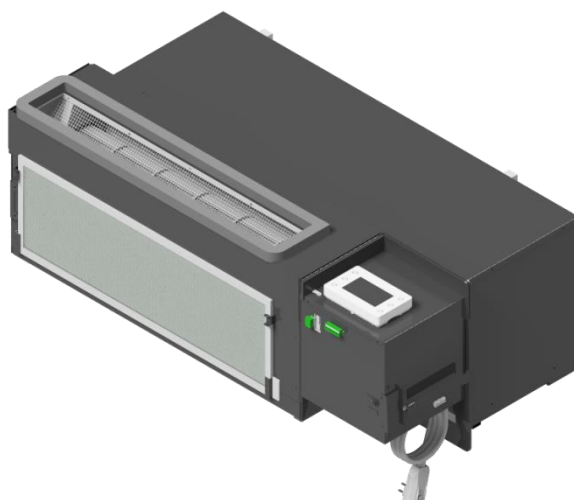




PACKAGED TERMINAL HEAT PUMP

INSTALLATION INSTRUCTIONS & OWNER'S MANUAL

MODEL EZLA SERIES



ATTENTION INSTALLATION PROFESSIONAL

As a professional installer you have an obligation to know the product better than the customer. This includes all safety precautions and related items.

Prior to actual installation, thoroughly familiarize yourself with this instruction manual. Pay special attention to all safety warnings.

Often during installation or repair it is possible to place yourself in a position which is more hazardous than when the unit is in operation.

Remember, it is your responsibility to install the product safely and to know it well enough to be able to instruct a customer in its safe use.

Safety is a matter of common sense, a matter of thinking before acting. Most dealers have a list of specific good safety practices, follow them.

The precautions listed in this Installation Manual are intended as supplemental to existing practices. However, if there is a direct conflict between existing practices and the content of this manual, the precautions listed here take precedence.

CONTENTS

IMPORTANT NOTES:	1
UNIT FEATURES.....	2
UNIT ACCESSORIES	3
INSTALLATION INSTRUCTIONS	4
MAINTENANCE AND CLEANING	15
NORMAL OPERATING SOUNDS AND CONDITIONS	16
DIAGNOSTIC CODES & SOLUTIONS	17
TROUBLESHOOTING.....	18
NOTES.....	20

IMPORTANT NOTES

Before using this manual, check the serial plate for proper model identification.

The installation and servicing of this equipment must be performed by qualified, experienced technicians only.

Due to our policy of continual product improvement, the right is reserved to change specifications and design without notice.

IMPORTANT NOTE TO THE OWNER

This manual is to be used by qualified, professionally trained HVAC technicians only. The manufacturer does not assume any responsibility for property damage or personal injury for improper service procedures or services performed by an unqualified Person.

IMPORTANT NOTE TO THE SERVICER

Read this manual and familiarize yourself with the specific items which must be adhered to before attempting to service this unit. The precautions listed in this Installation Manual are intended as supplemental to existing practices. However, if there is a direct conflict between existing practices and the content of this manual, the precautions listed here take precedence.

RECOGNIZE THIS SYMBOL AS A SAFETY PRECAUTION

WARNING

THE MANUFACTURER WILL NOT BE RESPONSIBLE FOR ANY INJURY OR PROPERTY, DAMAGE ARISING FROM IMPROPER SERVICE OR SERVICE PROCEDURES. IF YOU INSTALL OR PERFORM SERVICE ON THIS UNIT, YOU ASSUME RESPONSIBILITY FOR ANY PERSONAL INJURY OR PROPERTY DAMAGE WHICH MAY RESULT, MANY JURISDICTIONS REQUIRE A LICENSE TO INSTALL OR SERVICE HEATING AND AIR CONDITIONING EQUIPMENT.

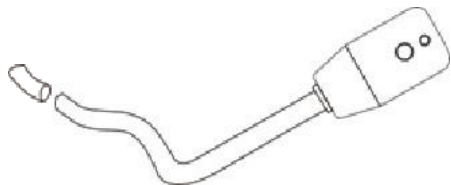
WARNING

HIGH VOLTAGE
DISCONNECT ALL POWER BEFORE SERVICING OR INSTALLING THIS UNIT. MULTIPLE POWER SOURCES MAY BE PRESENT, FAILURE TO DO SO MAY CAUSE PROPERTY DAMAGE, PERSONAL INJURY OR DEATH.

UNIT FEATURES

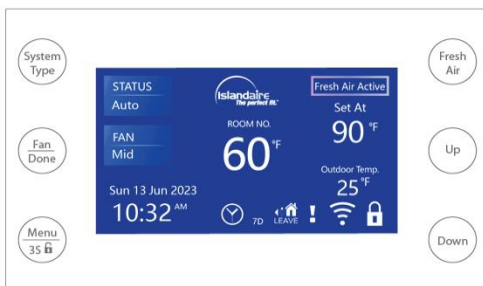
This unit has many features which are different than those found on conventional PTAC units. The service technician must be familiar with these features in order to properly handle the unit.

LCDI Cords - Underwriters Laboratories and the National Electric Code (NEC) now require power cords that sense current leakage and can open the electrical circuit to the unit on units rated at 250 volts or less. In the event that unit does not operate, check the reset button located on or near the head of the power cord as part of the normal troubleshooting procedure.



LCDI power Cord

- **Automatic 3-minute compressor lockout** - After the compressor cycles off, it will not restart for three minutes.
- **Random restart delay** - To help eliminate power surges after a power outage, the unit is equipped with a two-to-four minute random restart delay feature. Whenever the unit is plugged in with the master switch turned on and the mode switch set in the cool or heat mode, a random restart will occur. A random restart condition can be avoided by setting the mode switch in the fan only or off position before applying power to the unit.
- **LCD panel controller** - Display the unit status, control the unit, adjust the unit operating parameters, and can connect to WIFI



- **High Pressure Protection** - The unit shuts off automatically when the pressure in the system is over 638 psi, and within 10 minutes after the compressor turns off, the unit will restart when the pressure falls back below 551 psi. This protection can effectively avoid bursting and leakage of pipes, lessen system failures and prolong service life.

- **Failure Tolerance** - If the unit is in protection mode less than 4 times in one hour, the accumulation times will reset to avoid system failure. Only when the unit enters protection mode more than 4 times in one hour, the system will fail to restart automatically and need manual restarting.
- **Standard Physical Dimensions** - The EZLA Series PTAC dimensions are 42" wide x 16" high x 23" deep.
- **Weather Protected Electrical Components** - Vital electrical components are protected from the weather by placement on the indoor side of the weather barrier.
- **Highly Featured Microprocessor Controls** - Microprocessor controls are programmed to interface with temperature sensors to maximize comfort conditions for the room occupant and provides many outstanding features. Thermistors are used to sense small changes in temperature to give excellent room control and allow the microprocessor to monitor and react to changing conditions.
- **Automatic Emergency Heat on Heat Pump Units** - Automatically uses electric resistance heat if the heat pump output is not sufficient to maintain selected room temperature.
- **High-Temperature Heat Pump Operation Protection** - Automatically protects the compressor if the heat pump is operated with high indoor coil temperatures. Power to the outdoor fan and the compressor are turned off if the indoor coil gets too hot during heat pump operation to prevent damage to the compressor.
- **Permanently Lubricated Fan Motors** - All units have two fan motors for quiet operation and maximum operating efficiency. Motors are permanently lubricated to reduce maintenance and totally enclosed to keep dirt and water out of the motor windings.
- **Indoor Fan Speed Selections LOW/HIGH** - Unit may be operated in low fan speed or high fan speed.
- **Rotary Compressor** - Smoother operation for quiet, dependable service and high efficiency.
- **Indoor Coil Frost Control** - Prevents indoor coil from freezing. Frost can form on the indoor coil when the unit is operated in cooling and when the outdoor temperature is low. The unit automatically shuts the compressor off until the indoor coil temperature warms to the point where frosting will no longer occur, then it restarts the compressor.
- **Condensate Heater equipped** - Prevents condensate freezing on the outside section of the unit (energizes at 34 °F).
- **Condensate Drain Valve equipped** - Automatically drains condensate when temperature reaches 42.8 °F to prevent freezing of condensate.

⚠ WARNING

HIGH VOLTAGE

DISCONNECT ALL POWER BEFORE
SERVICING OR INSTALLING THIS UNIT.
MULTIPLE POWER SOURCES MAY BE PRESENT,
FAILURE TO DO SO MAY CAUSE PROPERTY
DAMAGE, PERSONAL INJURY OR DEATH.

UNIT ACCESSORIES

This unit is designed for through-the-wall installation in new or existing buildings. To complete the installation of this PTAC, an insulated wall sleeve and an outdoor grille (either stamped aluminum or architectural grille) is required.

The chassis and the cabinet front are shipped in one carton. Optional accessories to complete a particular installation include the following:

OPTIONAL ACCESSORIES

Power Switch Kit

Wall Sleeve Kit

Key Lock Kit

Drain Kit

Filter Kit

Hard Wire Kit

Wire Harness Kit

Architectural Grille Kit

Stamped Louver Kit

LCDI Power Cord

Wireless IR Antenna

Wireless IR Thermostat

Electric And Non Electric Sub Base
Kit

NOTE: Consult sales literature for the appropriate voltage and amperage selections, if applicable.

INSTALLATION INSTRUCTIONS

To ensure the unit operates safely and efficiently, it must be installed, operated and maintained according to these installation and operating instructions and all local codes and ordinances or, in their absence, with the latest edition of the National Electric Code. Proper installation of this unit is described in the following sections. Following the steps in the order presented should ensure proper installation.

⚠ IMPORTANT

TO AVOID PERMANENT DAMAGE TO THE UNIT, DO NOT OPERATE DURING CONSTRUCTION IN AN OPEN SPACE OR AS A SUPPLEMENTAL HEATING AND COOLING SOURCE DURING CONSTRUCTION.

INSPECTION

1. Upon receipt of the equipment, carefully check the shipment again on the Bill of Lading.
2. Make sure all units have been received.
3. Inspect the packaging for any damage.
4. Ensure that any damage is noted on the delivering carrier's Bill of Lading.

NOTE: It is the responsibility of the purchaser to file all necessary claims with the delivering carrier in a timely fashion. Many carriers have a 15 day notice period from receipt of delivery to file any and all claims.

OVERVIEW

IMPORTANT NOTES:

- The unit is equipped with a rubber grommet-mounted compressor. These grommets are factory set and require no adjustment.
- Depending on the size and style of the louver chosen, determine whether it can be installed before or after sleeve installation.
- Check the indoor and outdoor grilles for obstructions to air flow. The unit must be located where curtains, furniture, trees, or other objects do not block air flow to and from the unit. If air is obstructed and/or deflected back into the unit, the air conditioner compressor may cycle on and off rapidly. This could damage the compressor or possibly void the warranty.

Installing the EZLA Series unit involves four main components and various accessory components as shown in Figure 1.

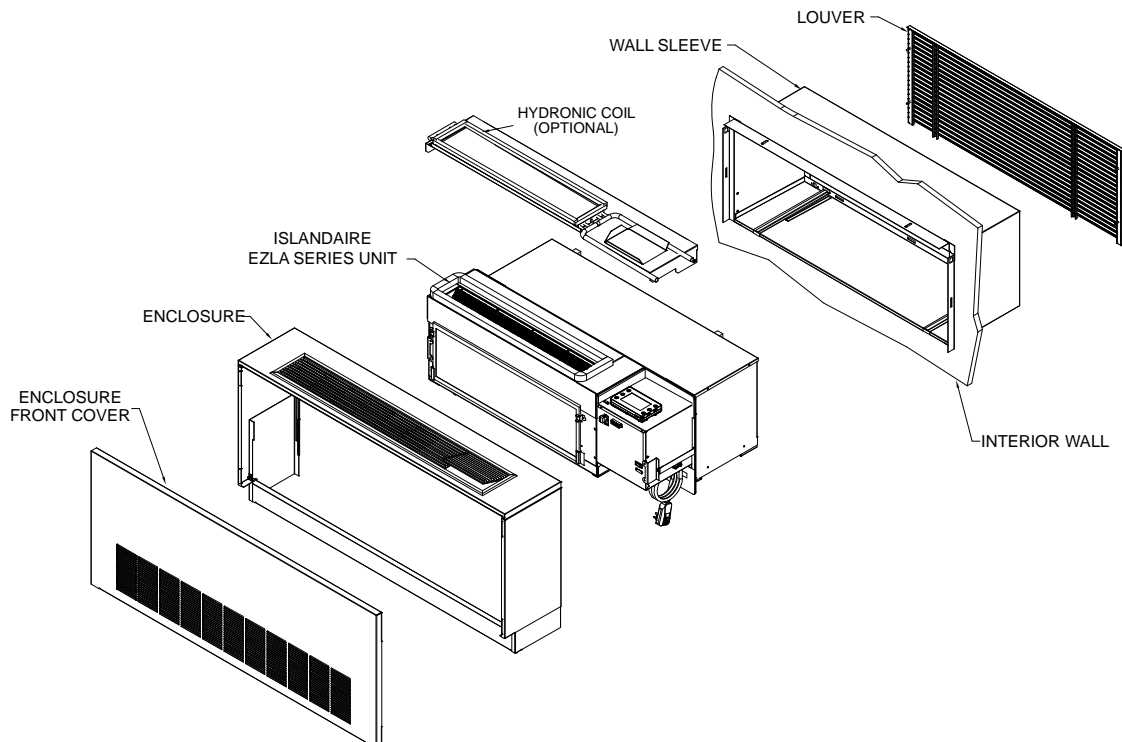


Figure 1. Typical Installation Components

PREPARATION

When making the wall opening, please observe the following requirements:

- A) The air inlet and outlet should be unblocked so the air can be delivered evenly to every corner of the room without obstructions. Units should be installed no closer than 12" apart when two units are side-by-side. A vertical clearance of 60" should be maintained between units.
- B) Follow all applicable codes for installation.
- C) Verify the amperage of the dedicated electrical service to the unit is correct and the unit can reach the power supply.
- D) Install the unit in places that are away from heat source or sources of flammable gases.
- E) Do not install the unit in places that are subject to excessive dust.

- F) Do not install the unit in places where the operational noise and exhausted air might disturb your neighbor.
- G) There should be sufficient space around the unit to facilitate maintenance and repairs (see Figure 2).

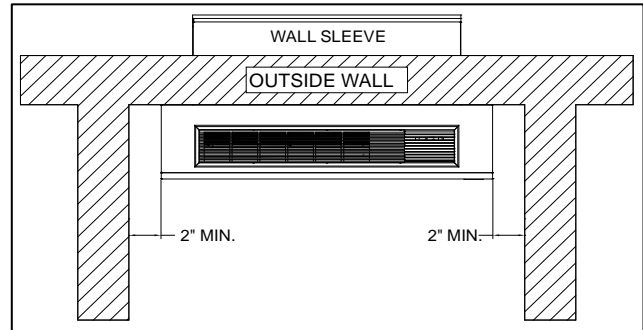


Figure 2. Installation Spacing Requirements

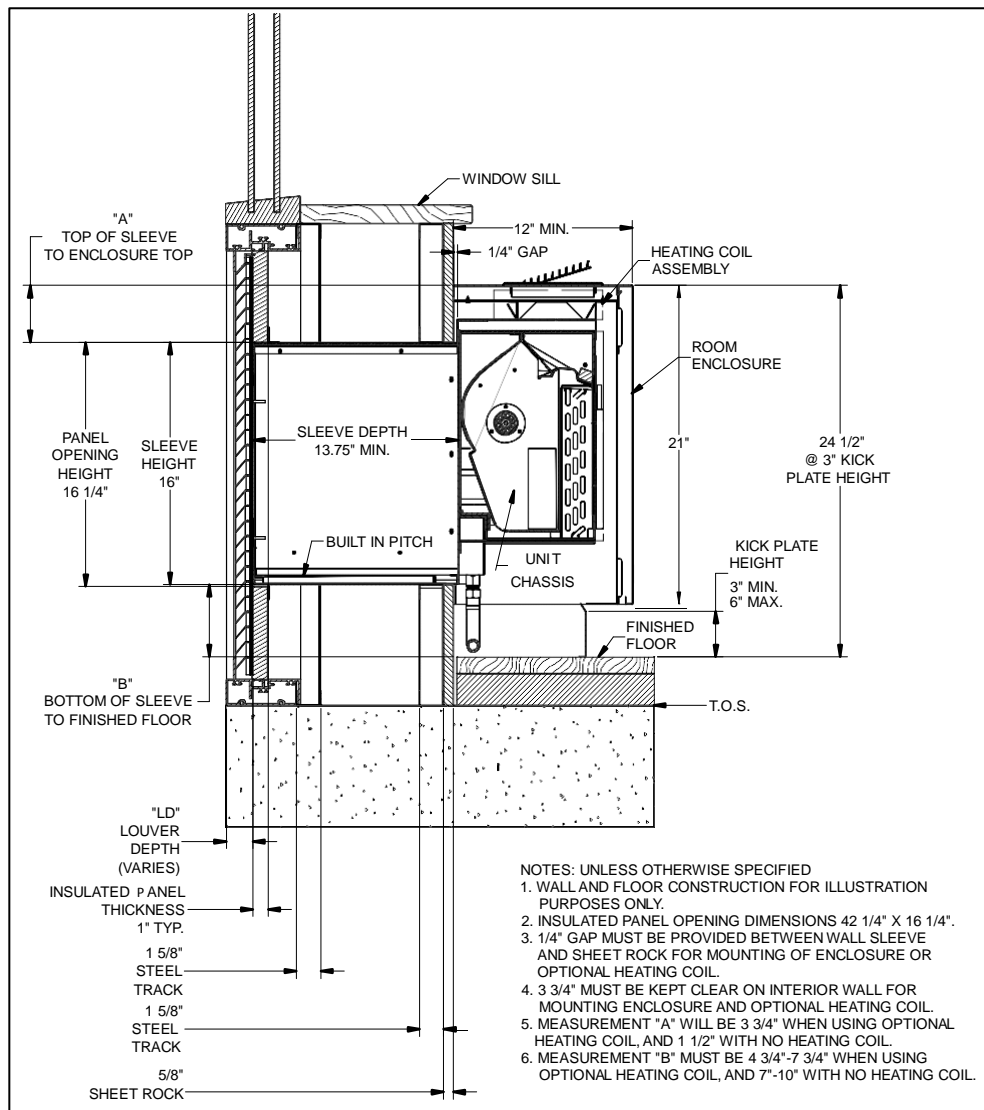


Figure 3. Sectional View – Panel Wall Construction

Typical installation for panel walls is shown in Figure 3 above. Optional Support Legs may be used if needed.

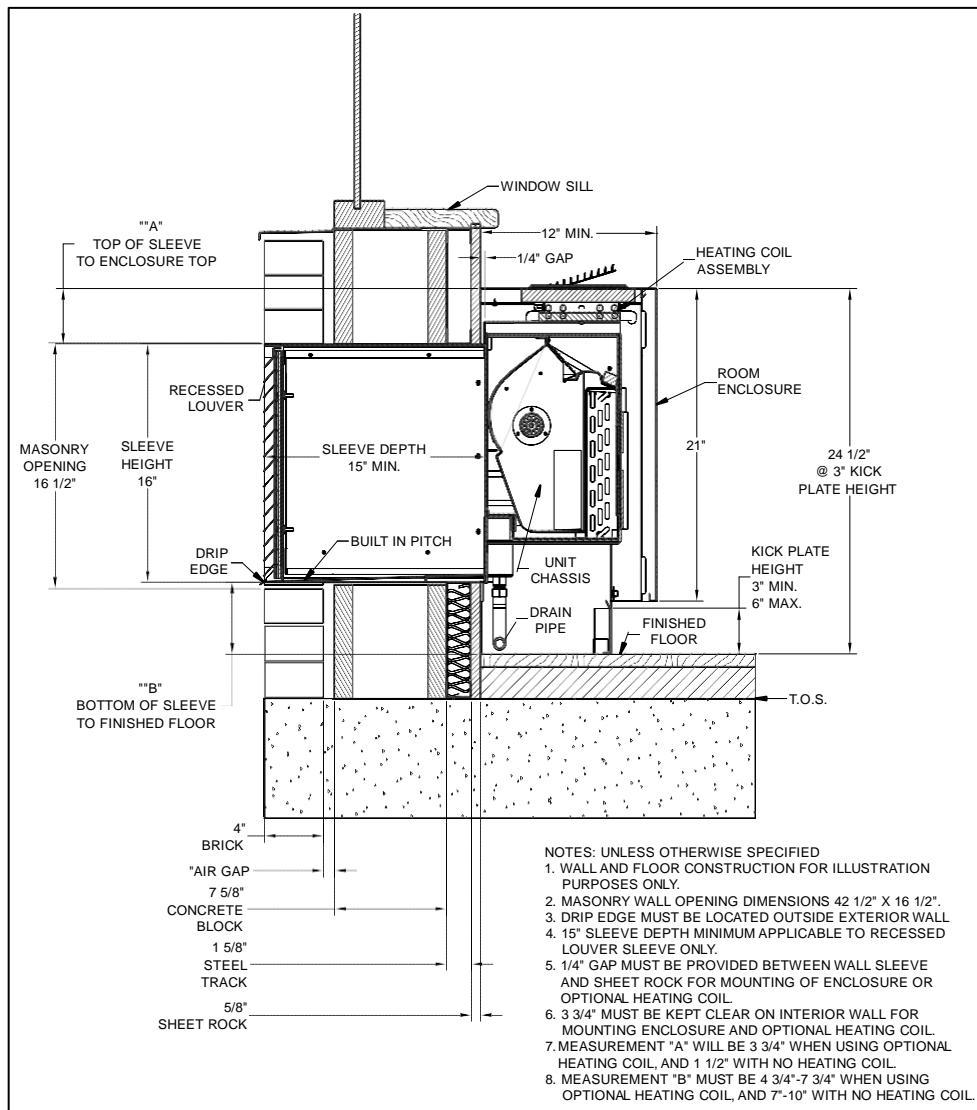


Figure 4. Sectional View – Masonry Wall Construction

Typical installation for masonry walls is shown in Figure 4 above.

Below are the available Wall Sleeves for the EZLA Unit:

Part Number 2401475 - Wall Sleeve Assembly,EZLA, 42"W x 16"H x 15"D, used with Recessed Louver Part Number

2401479 - Wall Sleeve Assembly,EZLA, 42"W x 16"H x 13.75"D, used with External Louver Part Number 2401477 - Wall

Sleeve Assembly,EZLA, 42"W x 16"H x 13.75"D, used with Panel Wall

* Note: Custom Wall Sleeves available for all building types/wall thicknesses.

Typical wall sleeve dimensions are provided in Figure 5.

Preparation of the Wall

The sleeve should be installed during construction and lintels should be used to support the block above the wall sleeve. The sleeve can not support the load of bricks/blocks. Ensure the wall is structurally sound to support the weight of the unit.

For existing construction, a wall opening must be created; proper dimensions are necessary to avoid use of fillers or additional framing. The sleeve is modular in height and width (refer to Figure 6 and Chart 1).

Height:

Fits two courses concrete block
Fits six courses standard brick
Fits five courses jumbo brick

Width:

Fits approximately three stud spaces

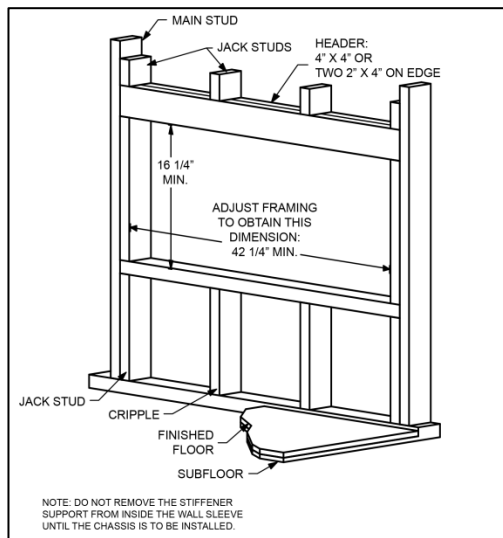


Figure 6. Wall Opening Details

Chart 1

	Minimum finished opening dimensions		Sleeve dimensions		
	Height	Width	Height	Width	Depth
No. 1	16-1/4"	42-1/2"	16"	42"	13-3/4" (16"/18"/24")
No. 2	16-1/4"	42-1/4"			

NOTE: No. 1 means using field supplied sleeve angles.
No. 2 means not using field supplied sleeve angles.

Sleeve Installation

In order for condensate water to drain properly inside the unit, the sleeve must be installed properly as follows:

1. Slide the chassis into the wall sleeve.
2. Level the sleeve in all directions as shown below:

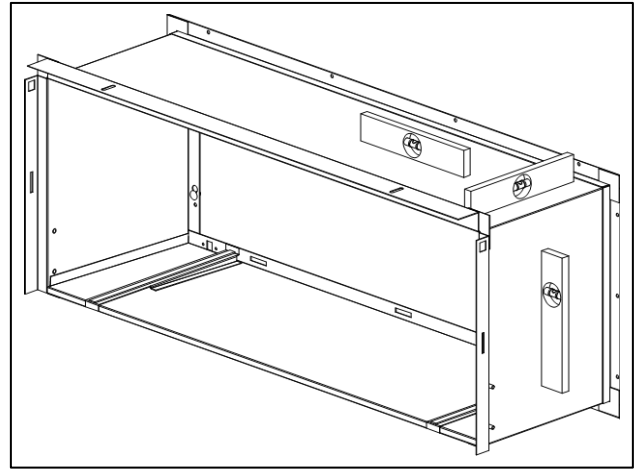


Figure 7. Leveling Wall Sleeve

3. Leave a 1/4" gap between the wall and the back surface of the wall sleeve flange. The gap is used for proper seating of the enclosure between the wall sleeve and interior wall.
4. Fasten the wall sleeve using appropriate anchoring hardware as shown in Figure 8.

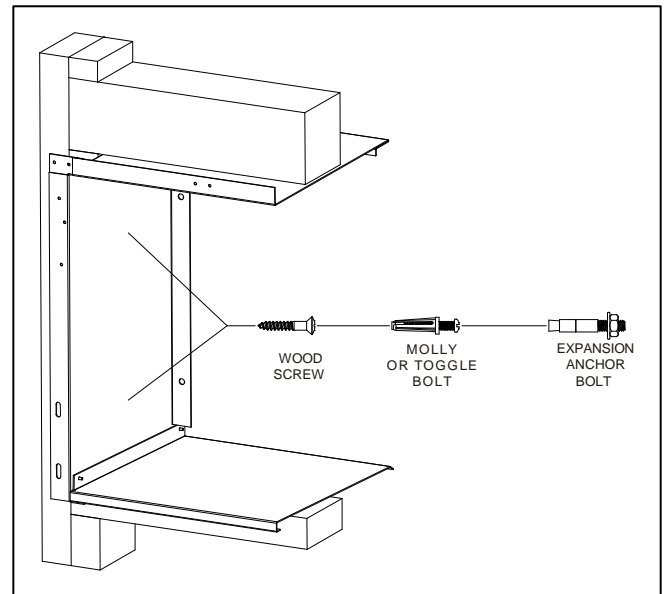


Figure 8. Wall Sleeve Anchors

Support Leg Installation (Optional Accessory)

Optional Support Legs are available and are intended for use only on panel wall sleeves; they are not applicable for use with masonry wall sleeves. The Support Leg Kit is Islandaire part number 4092506. See Figures 9 and 10 for mounting details.

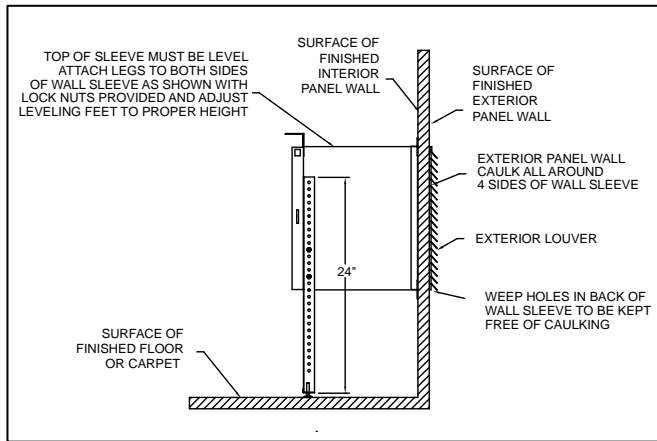


Figure 9. Optional Support Leg Dimensions

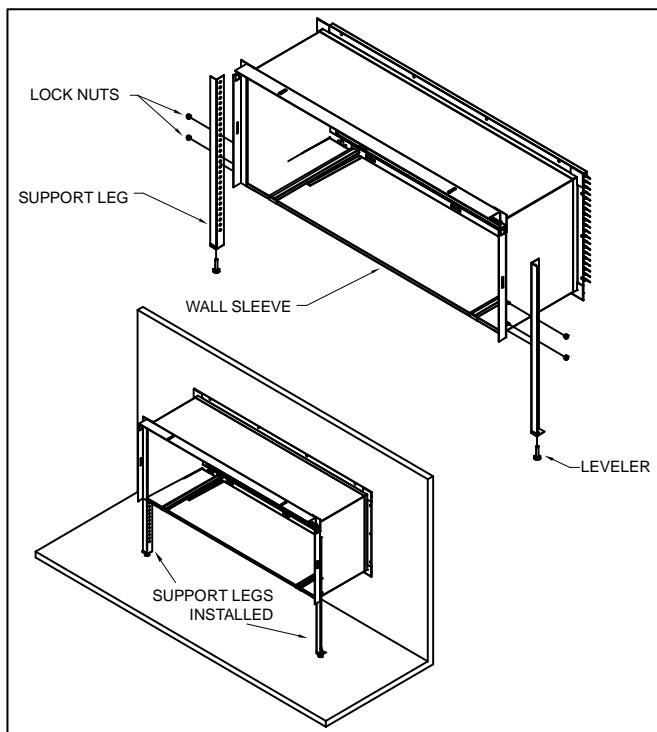
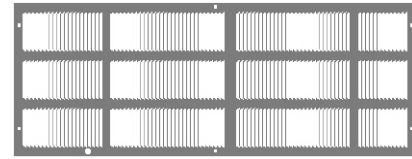


Figure 10. Support Leg Installation

OUTDOOR LOUVER (GRILLE) (OPTIONAL ACCESSORY)



Flush Stamped Louver



Architectural Louver (recessed or surface mount)

An outside louver must be installed to direct air flow for proper unit operation and also protect the outdoor coil. The louver must be installed before installing the chassis.

When replacing an old chassis with an existing louver or using a specialized louver in a new installation, please check with Islandaire engineering to determine if the new chassis should be used with the non-standard specialized louver. An improper outdoor louver can decrease cooling or heating capacity, increase energy usage and shorten compressor life and possibly void the warranty.

Architectural Outdoor Louver part number 6070422 (surface mount) and part number 6070134 (recessed mount) are provided with Islandaire Louver Hardware Kit part number 4091137.

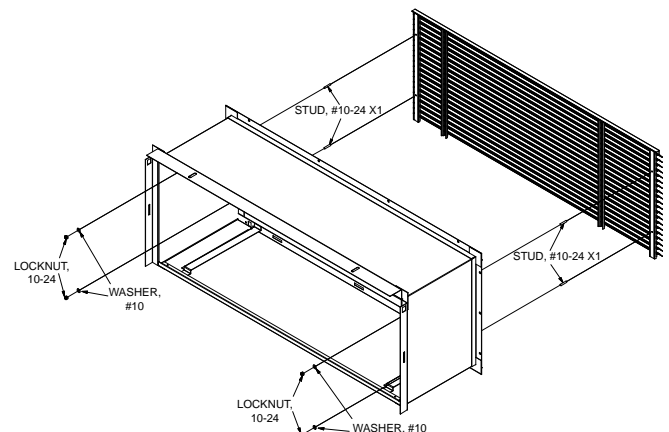


Figure 11. Louver Installation

CHASSIS INSTALLATION/DRAIN CONNECTION

1. Slide the chassis into the wall sleeve until each of the two (2) pre-installed Chassis Brackets (located on each side of the chassis as shown in Figure 12) hook into the slots located on each side of the wall sleeve. Visually confirm brackets are securely latched into the wall sleeve bracket slots on each side.

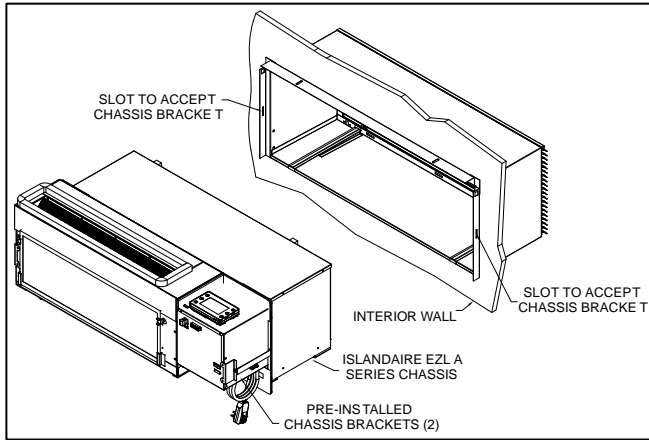


Figure 12. Chassis Brackets

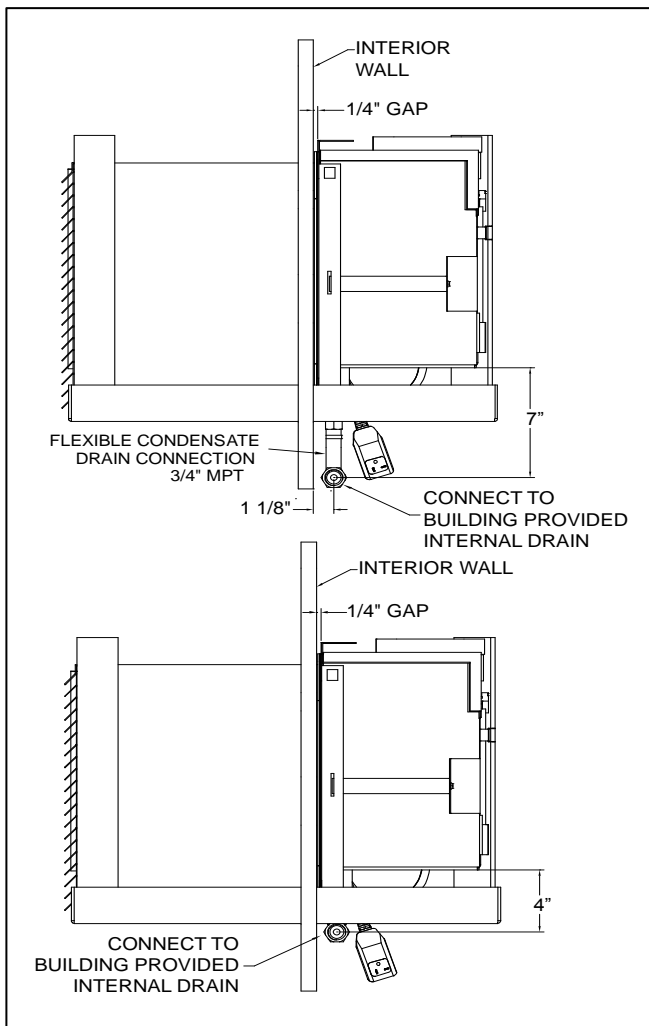


Figure 13. Drain Connection

2. Connect flexible condensate drain connection (3/4" MPT) to building drain system (see Figure 13).

CABINET ENCLOSURE INSTALLATION

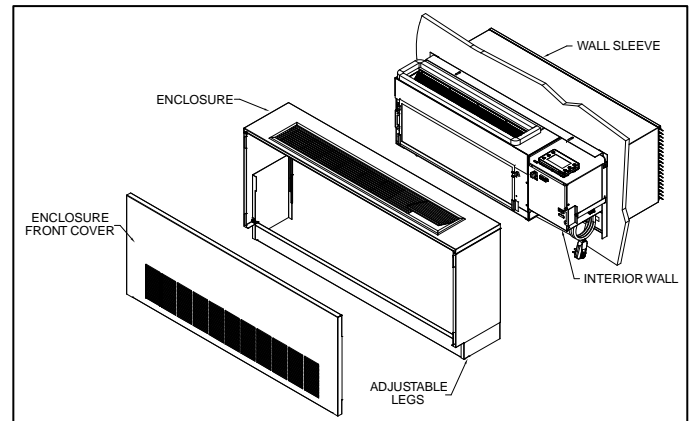
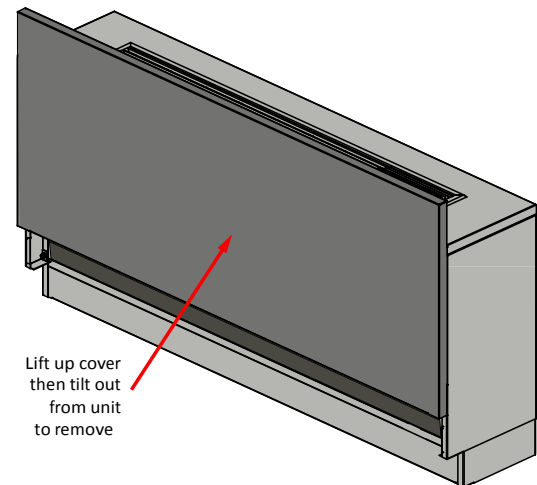


Figure 14. Enclosure Installation

1. Position the enclosure over the wall sleeve and lower it down so it sits on the sleeve top flange.
2. Attach the enclosure to the interior wall at two points on each side, where the lower most screw is also used for the kick panel (adjustable legs) height adjustment. Mounting holes are provided in the enclosure so no modification of the enclosure is necessary.
3. Attach the enclosure front cover as described in Cabinet Front Cover Removal/Installation procedure.

Cabinet Front Cover Removal/Installation

1. To remove, grasp the Cabinet Front Cover and lift upward until disengaged from enclosure.



2. Tilt the top of cover away from the chassis and remove.
3. Reverse this procedure to install the Cabinet Front Cover.

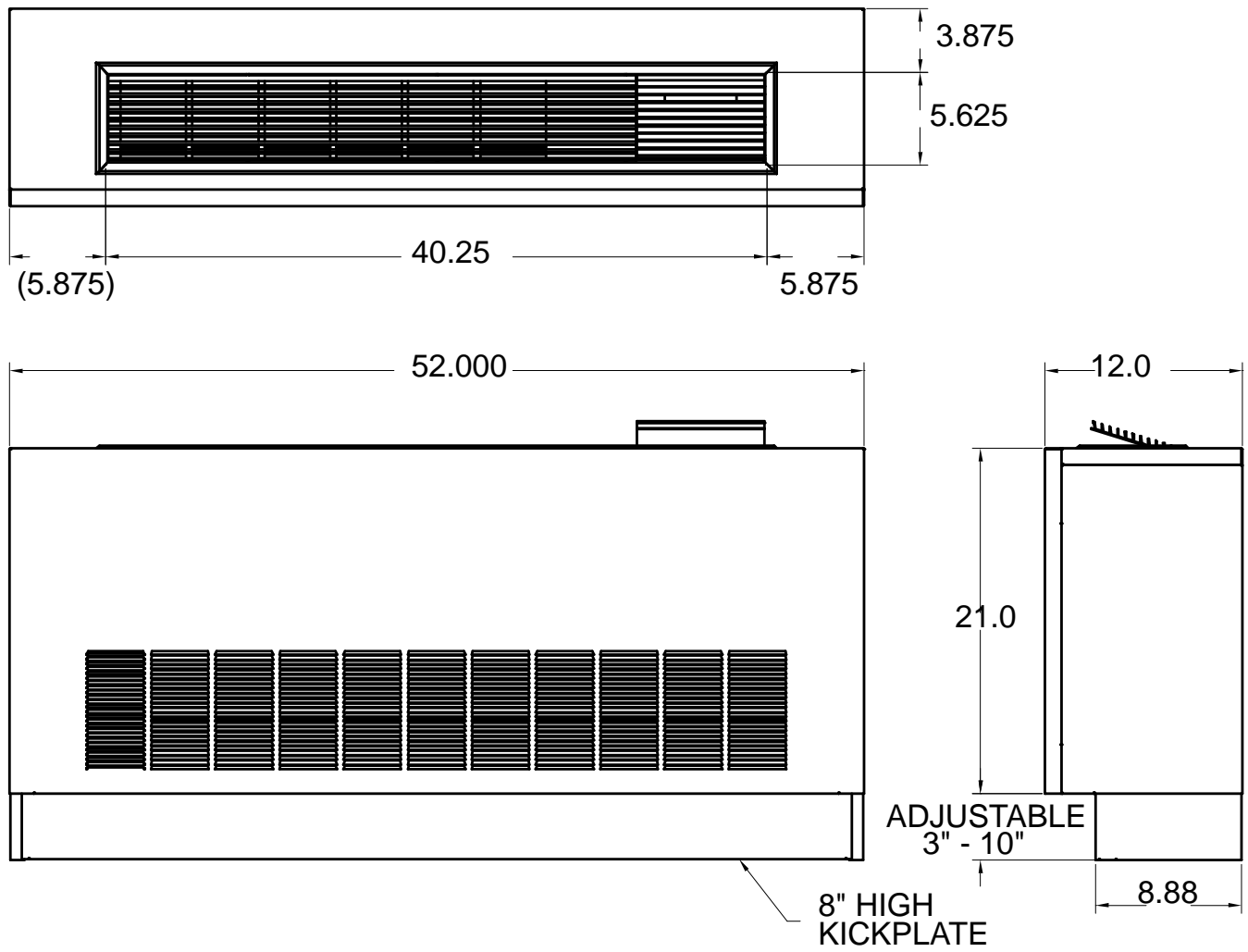


Figure 15. Enclosure Assembly Dimensions

WIRING

230~208V units are equipped with LCDI power cords and can open the electrical circuit to the unit. In the event the unit does not operate, check the reset button located on or near the head of the power cord as part of the normal troubleshooting procedure.

⚠ WARNING

HIGH VOLTAGE

DISCONNECT ALL POWER BEFORE SERVICING OR INSTALLING THIS UNIT. MULTIPLE POWER SOURCES MAY BE PRESENT, FAILURE TO DO SO MAY CAUSE PROPERTY DAMAGE, PERSONAL INJURY OR DEATH.

DO NOT SERVICE THIS UNIT WITHOUT FIRST SHUTTING OFF THE POWER TO THE UNIT FROM THE CIRCUIT BREAKER AND/OR REMOVING THE UNIT CORD SET PLUG FROM THE WALL OUTLET.

⚠ WARNING

TO AVOID THE RISK OF PROPERTY DAMAGE, PERSONAL INJURY OR FIRE, USE ONLY COPPER CONDUCTORS.

⚠ WARNING

TO AVOID THE RISK OF PROPERTY DAMAGE, PERSONAL INJURY OR FIRE, DO NOT INSTALL WITH POWER CORD STRETCHED OR UNDER A STRAIN AS THIS MAY CREATE LOOSE PLUG/RECEPTACLE CONNECTION.

⚠ WARNING

TO AVOID THE RISK OF PERSONAL INJURY, WIRING TO THE UNIT MUST BE PROPERLY POLARIZED AND GROUNDED.

⚠ WARNING

TO AVOID PROPERTY DAMAGE, PERSONAL INJURY OR DEATH DUE TO ELECTRICAL SHOCK, DO NOT USE AN EXTENSION CORD WITH THIS UNIT.

WARNING

THIS AIR CONDITIONER IS NOT MEANT TO PROVIDE UNATTENDED COOLING OR LIFE SUPPORT FOR PERSONS OR ANIMALS WHO ARE UNABLE TO REACT TO THE FAILURE OF THIS PRODUCT.

THE FAILURE OF AN UNATTENDED AIR CONDITIONER MAY RESULT IN EXTREME HEAT IN THE CONDITIONED SPACE CAUSING OVERHEATING OR DEATH OF PERSONS OR ANIMALS.

VOLTAGE MEASUREMENTS

Once the unit is properly wired, measure the unit supply voltage. Voltage must fall within the voltage utilization range given in Chart 2.

Chart 2. Voltage Utilization Range

Operating Voltage	Voltage Utilization Range	
Rating	Minimum	Maximum
115	104	127
230/ 208	197	253

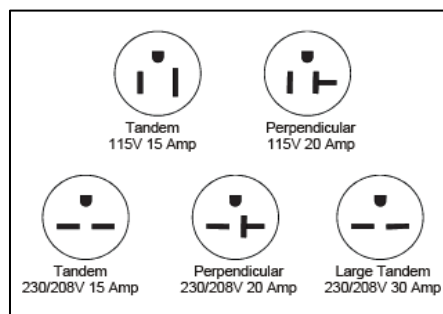
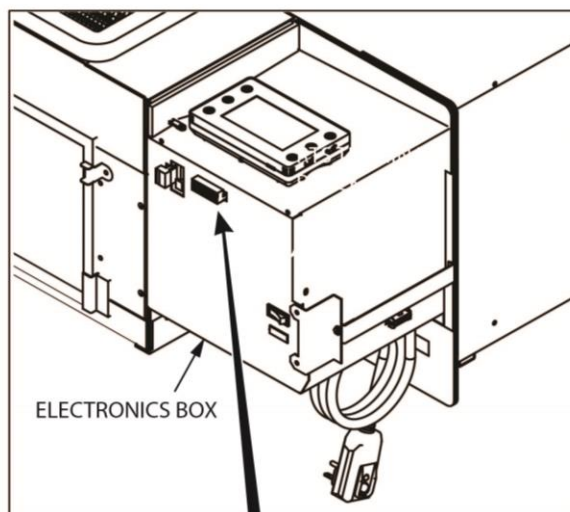


Figure 16. Power Cord Receptacles



WIRE COLOR:

R = RED
FD = PURPLE
GH = GREEN
B = BLUE
Y = YELLOW
W = WHITE
GL = ORANGE
C = BLACK

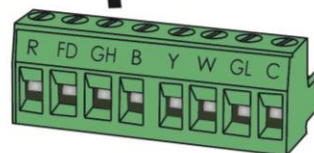


Figure 17. Wall Mounted Thermostat Wiring

Please read me

1. When additional plug is required (e.g., for electrical heater power), remove Line1 (Neutral) and Line 2 (Line) jumper wires.
2. Do not disconnect or modify cooling power input connection.
3. Switches 1 and 2 and Connectors CN12 and CN26 are located on the back side of circuit board.
4. DIP Switch 2 (switch 4) functionality applies only if thermostat control is not mounted on unit):
On = Unit mounted thermostat settings are used by Main Circuit Board
Off = DIP Switch 1 settings are used by Main Circuit Board.

OPTIONAL FRESH AIR VENT

The Fresh Air Vent allows outside air to be drawn into the conditioned area. This outside air can provide ventilation when the blower is operating, but it will increase the heating or cooling load and operating costs.

A Vent OPEN/CLOSE switch is located on the lower front side of the unit, behind the cabinet front cover.

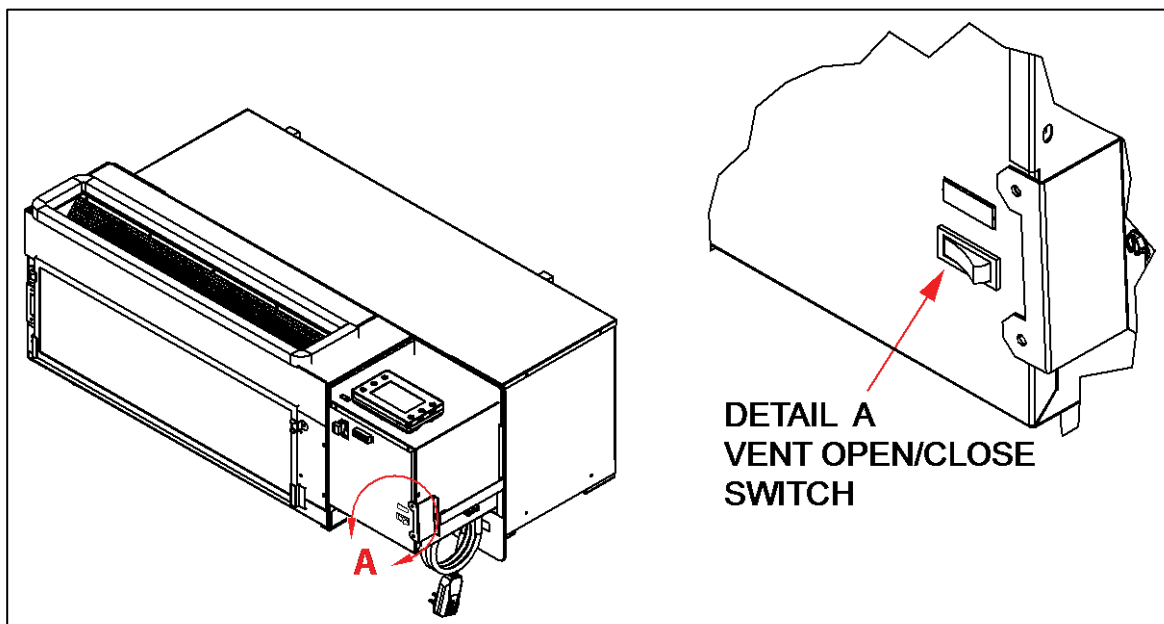


Figure 18. Fresh Air Vent Switch Location

When the switch is set to the CLOSE position, only the air inside the room is circulated and filtered. When the switch is set to the OPEN position, some outdoor air will be drawn into room (up to 72 CFM / 2.0 m³/min. maximum). Note: This will reduce heating or cooling efficiency.

To obtain access to the vent control switch:

1. Remove the cabinet front (see Cabinet Front Cover Removal/Installation).
2. Set the vent control rocker switch to either open or close the damper (see Figure 18).

MAINTENANCE AND CLEANING

WARNING

HIGH VOLTAGE

DISCONNECT ALL POWER BEFORE SERVICING OR INSTALLING THIS UNIT. MULTIPLE POWER SOURCES MAY BE PRESENT, FAILURE TO DO SO MAY CAUSE PROPERTY DAMAGE, PERSONAL INJURY OR DEATH.

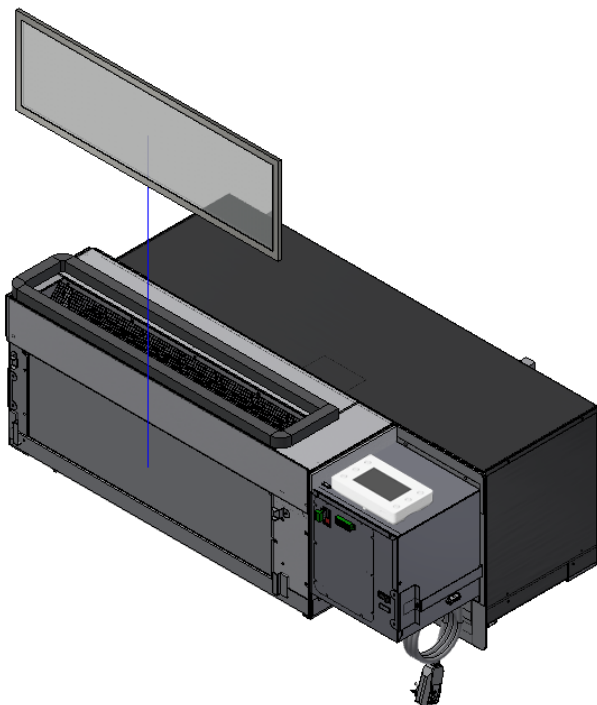
MONTHLY MAINTENANCE AND CLEANING

Intake Air Filters

To properly maintain the operational performance of your PTAC unit, it is extremely important that the inlet air filter be cleaned once per month or more often if operated in dusty or dirty locations or conditions. The intake air filter is constructed of durable polypropylene. The air intake filter can be easily inserted into the cabinet front, using the filter guides. Before cleaning the intake filter, turn the unit off by setting the mode switch to the OFF position.

The following procedure is used to remove the intake filter:

1. Remove Cabinet Front Cover.
2. Pull the filter straight up and remove.
3. Clean filter with vacuum or with running water. Reverse this procedure to reinstall the filter.



Vent Screen

Before cleaning the vent screen, disconnect power to the unit by unplugging the power cord at the wall outlet or subbase, or disconnect power at the fuse box or circuit breaker. If unit is operated with vent door closed, the vent screen does not need to be cleaned.

1. Remove the cabinet front as described in Cabinet Front Cover Removal/Installation.
2. Remove the screws securing the chassis to the wall sleeve.
3. Slide the chassis out of the wall sleeve far enough so that the vent screen is accessible.
4. Clean the vent screen, slide the chassis back into the wall sleeve, secure it in place with six screws and reinstall the front cabinet.

Cabinet Front

The cabinet front and discharge air grille can be cleaned with a water dampened cloth. Under no circumstances should hydrocarbon-based cleaners (e.g., acetone, benzene, naphtha gasoline, etc.) or ammonia based cleaners be used to clean the front or air grilles. Use care when cleaning the control area.

YEARLY MAINTENANCE AND CLEANING

NOTE: Use a mild biodegradable detergent when cleaning the unit. Special care must be taken to protect the unit's control board and other electrical components from getting any liquid on them while cleaning. The use of harsh or caustic cleaning agents or materials such as bleach or coil cleaners that are not designed for PTAC products will cause damage or deterioration of the aluminum fin or coil material and is not recommended. Care must be taken not to bend the aluminum fin stock.

Routine Scheduled Maintenance

To achieve continuing top performance and high efficiency, establish a "once a year" cleaning/inspection schedule for the unit. Take the unit out of the sleeve and thoroughly clean and rinse. Be sure to include in the yearly cleaning the evaporator coil, condenser coil, base pan, and drain passages.

Scheduled maintenance can be accomplished by either qualified local maintenance staff or by an authorized servicer following the instructions described in this manual.

Adverse Operating Conditions Maintenance

Units operating in dusty or corrosive locations (i.e., dusty construction site or sea coast) must be cleaned more often. A minimum of four (4) times a year will maintain proper operational conditions and protect unit components.

Wall Sleeve

Clean the wall sleeve while cleaning the unit. The caulking around the sleeve should be checked to make sure that any potential air and water openings around the sleeve are properly sealed. The wall sleeve's level should also be rechecked. Proper leveling for most installations are a 1/4 bubble tilt towards the outside and level from right to left. Contact your sales person for detailed maintenance or cleaning instructions.

WARNING

DO NOT USE COMMERCIAL GRADE COIL CLEANERS. SOME OF THESE CLEANERS MAY CONTAIN ETHYLENE DIAMINE TETRACETIC ACID (EDTA) WHICH CAN SHORTEN THE LIFE OF THE CONDENSER COIL.

WARNING

HIGH PRESSURE AND HIGH TEMPERATURE CLEANING IS NOT RECOMMENDED. DOING SO COULD DAMAGE THE ALUMINUM FIN STOCK AND ELECTRICAL COMPONENTS.

Base Pan and Condenser Coil

Before cleaning the base pan and condenser coil, turn OFF unit mode switch and disconnect power to the unit.

To disconnect power, either unplug the power cord at the wall outlet or subbase, or disconnect power at the fuse box or circuit breaker.

1. Create a water tight seal by tightly covering the entire control panel area and fan motor with plastic. Creating this seal prevents liquids from entering the control area or the fan motor and damaging the unit.
2. Spray condenser coil and base pan down with water. Next spray a mild biodegradable detergent onto the condenser coil and base pan. Let set for five (5) minutes.
3. Rinse condenser coil and base pan with water again.

NOTE: Ensure water pressure is no higher than that of an ordinary garden hose and the water temperature no higher than 120 °F.

4. Tilt the non-compressor side of the unit up no higher than 45° and allow water to drain out the opposite side of the unit.
5. Remove excess water left in the base pan by wiping the base pan with a dry cloth.
6. Remove the water-tight seal from the motor and control panel area.

7. Reinstall unit back into wall sleeve.

8. Allow unit to dry for 24 hours before reapplying power. When power is reapplied, test unit for proper operation.

9. Place a non-acidic algicide in the base pan to inhibit bacteria growth. Ensure the algicide is compatible with wet coil operation and is not corrosive to the coil.

Clearance Check

Clearances around the unit should also be checked to make sure that the intake air and discharge air paths have not become blocked or restricted. A minimum of eight inches clearance is needed from unit to furniture, beds, or other objects for proper operation. Restricted discharge or intake air will reduce the unit's operational performance. In severe airflow restrictions damage can occur to unit components such as the compressor, electric heater or fan motor.

NORMAL OPERATING SOUNDS AND CONDITIONS

Water Trickling Sounds

Water is picked up and distributed over the coil. This improves the efficiency and helps with water removal.

Water Dripping

Water will collect in the base pan during high humidity days. This can cause overflow and drip from the outside of the unit.

Air Sounds

The fan cycle switch sets the operational mode of the fan. In the ON position, the fan will run continuously whenever power is applied in this mode. In the AUTO position, the fan will cycle on and off with the compressor or electric heater.

Starting Delay

You may notice a few minutes delay in starting if you try to restart the unit too soon after turning it off or if you adjust the thermostat right after the compressor has shut off. This is due to a built-in delay to protect the compressor.

Buzzer Response

The buzzer will chime "Di" (0.1 sec) in response when receiving the effective order from key pad control.

DIAGNOSTIC CODES & SOLUTIONS

Failure Code	Content of Defect	Solutions
F1	Communication failure between indoor unit and outdoor unit	Check the communication cables, make sure they are firmly connected. If the cables are broken, replace them.
F2	Indoor ambient temperature sensor fault	Check the sensor's plug is firmly connected. If the sensor is broken, replace it.
F3	Indoor coil temperature sensor fault	Check the sensor's plug is firmly connected. If the sensor is broken, replace it.
F5	IPM protection, include heat sink over heat protection	Make sure indoor and outdoor vents are not blocked, indoor fan and outdoor fan are running well and compressor will not overload. After removing any fault, power on again for 60 seconds, then turn on the unit for operation.
F6	Outdoor ambient temperature sensor fault	Check the sensor's plug is firmly connected. If the sensor is broken, replace it.
F7	Outdoor coil temperature sensor fault	Check the sensor's plug is firmly connected. If the sensor is broken, replace it.
F8	Indoor outlet temperature sensor failure or Indoor outlet air over heat protection in Electric heating mode	Check if the indoor fan is running good and make sure no obstacle is blocking the air circulation. Check the sensor's plug is firmly connected. If the sensor is broken, replace it.
F9	Compressor discharge temperature fault	Check the sensor's plug is firmly connected. If the sensor is broken, replace it.
FC	DC compressor starting failure or compressor driving fault	Check the DIP switches on the main board (3-position, in red color) are correct, it must match the wiring diagram. Make sure the compressor power wires are firmly connected.
FH	Indoor EEPROM fault, include EEPROM communication fault or data verification error	Check the EEPROM chip is firmly plugged. If error still occurs, replace the chip.
P1	Over heat at indoor coil protection in HEATING (overload in heating). Over heat at outdoor coil protection in COOLING (overload at cooling).	Make sure indoor and outdoor vents are not blocked and indoor and outdoor fans are both working well. Clean the air filter and the condenser.
P2	DC inverter module overheat, over current protection	Make sure indoor and outdoor vents are not blocked and indoor and outdoor fans are both working well. Check the DIP switch on the main board (3-position, in red color) are correct, and match the wiring diagram. Make sure the compressor power wires are firmly connected.
P4	Compressor discharge overheat protection (or compressor overheat)	Make sure indoor and outdoor vents are not blocked and indoor and outdoor fans are both working well. Check the DIP switch on the main board (3-position, in red color) is correct, it must match the wiring diagram.
P7	Over voltage or under voltage protection	Make sure the power supply is within the requirement (AC208/230V $\pm 10\%$). If power supply is OK, but problem persists, replace the inverter IPM.

TROUBLESHOOTING

POSSIBLE CAUSES	SOLUTIONS
UNIT DOES NOT START <ul style="list-style-type: none"> Unit may have become unplugged Fuse may have blown Circuit breaker may have been tripped Unit may be off or in wall thermostat mode. Unit may be in a protection or diagnostic failure mode. 	<ul style="list-style-type: none"> Check that plug is plugged securely in wall receptacle. <p>Note: Plug has a test/reset button on it. Make sure the plug has not tripped.</p> <ul style="list-style-type: none"> Replace the fuse Reset circuit breaker Turn unit on (bottom right button on keypad). Check diagnostic codes - See section on diagnostic codes.
STRANGE NUMBERS/CHARACTERS ON DISPLAY <ul style="list-style-type: none"> Unit may be in a protection or diagnostic failure mode. Check section on DIP switch settings to verify dip switches are set properly. 	<ul style="list-style-type: none"> The unit may be in a diagnostic condition. Check diagnostic codes - See section on diagnostic codes. The unit may be set for °C (instead of °F), see the keypad operation section.
UNIT MAKING NOISES	<ul style="list-style-type: none"> Clicking, gurgling and whooshing noises are normal during operation of unit.
UNIT NOT COOLING / HEATING ROOM <ul style="list-style-type: none"> Unit air discharge section is blocked Temperature setting is not high or low enough. Unit air filters are dirty. Room is excessively hot or cold when unit is started. Vent door left open. Unit may be in a protection or diagnostic failure mode. Compressor is in protective time delay <p>Note: To prevent tripping of the compressor overload, there is a protective time delay (approx. 3 minutes) on starting the compressor, such as after a power outage, or restarting after it has been turned off.</p>	<ul style="list-style-type: none"> Make sure that curtains, blinds or furniture are not restricting or blocking unit airflow. Reset to a lower or higher temperature setting. Set point limits may not allow the unit to heat or cool the room to the desired temperature settings. Check Service Settings section. Remove and clean filters. Allow sufficient amount of time for unit to heat or cool the room. Start heating or cooling early before outdoor temperature, cooking heat or gatherings of people make room uncomfortable. Close vent door. Check section on Diagnostic Codes. Wait approximately 3 minutes for compressor to start.
WATER DRIPPING OUTSIDE	<ul style="list-style-type: none"> If a drain kit has not been installed, condensation runoff during very hot and humid weather is normal. If a drain kit has been installed and is connected to a drain system, check gaskets and fittings around drain for leaks and/or clogs.
WATER DRIPPING INSIDE <ul style="list-style-type: none"> Wall sleeve is not installed level. 	<ul style="list-style-type: none"> Wall sleeve must be installed level for proper drainage of condensation. Check that installation is level and make any necessary adjustments.
ICE OR FROST FORMS ON INDOOR COIL <ul style="list-style-type: none"> Low outdoor temperature. Unit air filters are dirty. 	<ul style="list-style-type: none"> If outdoor temperature is approximately 55 °F (12.8 °C) or below, frost may form on indoor coil when unit is in Cooling mode. Switch unit to FAN operation until ice or frost melts. Remove and clean filters.
COMPRESSOR PROTECTION <ul style="list-style-type: none"> Power may have cycled putting compressor in Random Compressor restart protection. 	<ul style="list-style-type: none"> To prevent short cycling of the compressor whenever the unit is plugged in or power has been cycled, a random compressor restart will occur. The restart delays start-up of the compressor for approximately 3 minutes, and then forces a minimum compressor run time of 3 minutes.

NOTES

[illegible]

NOTES

This image shows a full page of blank, lined paper. It features approximately 28 horizontal blue or grey lines spaced evenly apart, typical of notebook paper. The lines extend across the entire width of the page, leaving small margins at the top and bottom. There are no vertical lines, text, or other markings on the page.



R.E. HANSEN INDUSTRIES, INC. DBA ISLANDAIRE

Address: 500 Middle Country Road
St. James, NY 11733

Phone: (631) 471-2900 **Fax:** (631) 471-2913

E-mail: sales@islandaire.com

Web www.islandaire.com



Doc. No. 6140495 Rev. J