



PACKAGED TERMINAL HEAT PUMP

INSTALLATION INSTRUCTIONS & OWNER'S MANUAL

MODEL EZVV 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.

Table of Contents

IMPORTANT NOTES.....	3
SAFETY PRECAUTIONS AND UNIT FEATURES.....	4
NOMENCLATURE AND UNIT SPECS.....	9
INSTALLATION NOTES.....	11
MINIMUM CLEARANCES.....	12
Dimensional Drawing (Unit Top View)	12
Chassis Location – EZVV 9K, 12K, and 15K BTU (Side View).....	14
Chassis Location Based on Door Position – EZVV 9K, 12K, and 15K BTU (Top View).....	14
Chassis Location – EZVV 18K and 24K BTU (Side View).....	16
Chassis Location Based on Door Position – EZVV 18K and 24K BTU (Top View).....	16
INSTALLATION INSTRUCTIONS.....	18
Overview	18
1. Install Wall Plenum.....	19
2. Install Exterior Louver	20
3. Attach Base Pan and Adjustable Legs.....	23
3.1 Install Extension to Adjustable Legs (Optional).....	24
4. Install Drain Connection(s).....	25
5. Mount Chassis on Base Pan/secure to Plenum.....	27
6. Attach Air Discharge Plenum	28
7. Connect the Top Duct	29
8. Unit Power Connection	28
9. Hardwire Connection.....	29
10. Voltage Measurements	30
11. Electrical Circuit Ratings	30
12. Remote Wall-Mounted Thermostat	30
ADAPTER KITS	32
OPTIONAL: HARDWARE KIT (P/N 4092539 & 4092552)	35
ACCESSORIES	36
DIAGRAMS AND BOM	39
BOM - EZVV 9K, 12K, and 15K BTU	39
BOM – EZVV 18K and 24K BTU.....	41
OPERATING INSTRUCTIONS.....	43
Start Up Checklist	43
Switch Setting	44
Control Panel Mode Setting	47
App Instructions	48
Error Code And Solutions	51
Normal Operating Sounds And Conditions	52
OPERATIONAL PRACTICES	52
Heat Pump Units	52
Activating Emergency Heat Operation	52
ROUTINE MAINTENANCE.....	53
TROUBLESHOOTING GUIDE.....	55
RETURN MATERIAL AUTHORIZATION (RMA) PROCEDURE	59

1 IMPORTANT NOTES

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

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.



This symbol indicates that the Operation Manual should be read carefully before operating this product.



Consult service manual before attempting repairs. All safety precautions must be followed.

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.

⚠ WARNING

FLAMMABLE REFRIGERANT USED



Refrigerant
Safety Group
A2L

⚠ WARNING

DO NOT USE MEANS TO ACCELERATE THE DEFROSTING PROCESS OR TO CLEAN, OTHER THAN THOSE RECOMMENDED BY THE MANUFACTURER.

THE APPLIANCE SHALL BE STORED IN A ROOM WITHOUT CONTINUOUSLY OPERATING IGNITION SOURCES (FOR EXAMPLE, OPEN FLAMES, AN OPERATING GAS APPLIANCE OR AN OPERATING ELECTRIC HEATER).

DO NOT PIERCE OR BURN.

BE AWARE THAT REFRIGERANTS MAY NOT CONTAIN AN ODOR.

SAFETY PRECAUTIONS FOR R32 REFRIGERANT

INFORMATION ON SERVICING

Pre-Work Area Safety Checks

Before repairing systems with flammable refrigerants, steps 1–6 must be completed to minimize ignition risks:

1. Work Procedure: Conduct work under a controlled procedure to minimize the presence of flammable gases or vapors.
2. General Work Area: Instruct all local staff on the nature of the work. Avoid working in confined spaces.
3. Refrigerant Detection: Check the area with a non-sparking, intrinsically safe detector before and during work to identify toxic or flammable atmospheres.
4. Fire Protection: Ensure a dry powder or fire extinguisher is adjacent to the charging/hot-work area.
5. Ignition Sources: Prohibit all ignition sources, including smoking, near installation or repair sites where refrigerant release is possible. Survey the area for hazards and display "No Smoking" signs.
6. Ventilation: Ensure the area is open or adequately ventilated before and during the work to safely disperse and expel any released refrigerant.

Checks to the refrigerating equipment

Where electrical components are being changed, they shall be fit for the purpose and to the correct specification. At all times, the manufacturer's maintenance and service guidelines shall be followed. If in doubt, consult the manufacturer's technical department for assistance.

The following checks shall be applied to installations using flammable refrigerants: the actual refrigerant charge is in accordance with the room size within which the refrigerant containing parts are installed;

- the ventilation machinery and outlets are operating adequately and are not obstructed;
- if an indirect refrigerating circuit is being used, the secondary circuit shall be checked for the presence of refrigerant;
- marking to the equipment continues to be visible and legible. Markings and signs that are illegible shall be corrected;
- refrigerating pipe or components are installed in a position where they are unlikely to be exposed to any substance which may corrode refrigerant containing components, unless the components

are constructed of materials which are inherently resistant to being corroded or are suitably protected against being so corroded.

Checks to electrical devices

Repair and maintenance to electrical components shall include initial safety checks and component inspection procedures. If a fault exists that could compromise safety, then no electrical supply shall be connected to the circuit until it is satisfactorily dealt with. If the fault cannot be corrected immediately but it is necessary to continue operation, an adequate temporary solution shall be used. This shall be reported to the owner of the equipment so all parties are advised.

Initial safety checks shall include:

- that capacitors are discharged: this shall be done in a safe manner to avoid possibility of sparking;
- that no live electrical components and wiring are exposed while charging, recovering or purging the system;
- that there is continuity of earth bonding.

Sealed components

Sealed electrical components shall be replaced.

Repair to intrinsically safe components

Intrinsically safe components must be replaced.

Cabling

Check that cabling will not be subject to wear, corrosion, excessive pressure, vibration, sharp edges or any other adverse environmental effects. The check shall also take into account the effects of aging or continual vibration from sources such as compressors or fans.

Detection of flammable refrigerants

Under no circumstances shall potential sources of ignition be used in the searching for or detection of refrigerant leaks. A halide torch (or any other detector using a naked flame) shall not be used.

If a leak is suspected, all naked flames shall be removed/extinguished. If a leakage of refrigerant is found which requires brazing, all of the refrigerant shall be recovered from the system, or isolated (by means of shut off valves) in a part of the system remote from the leak.

The following leak detection methods are deemed acceptable for all refrigerant systems:

- Electronic leak detectors may be used to detect refrigerant leaks but, in the case of flammable refrigerants, the sensitivity may not be adequate, or may need re-calibration. (Detection equipment shall be calibrated in a refrigerant-free area.)

Ensure that the detector is not a potential source of ignition and is suitable for the refrigerant used. Leak detection equipment shall be set at a

percentage of the LFL of the refrigerant and shall be calibrated to the refrigerant employed, and the appropriate percentage of gas (25% maximum) is confirmed.

- Leak detection fluids are also suitable for use with most refrigerants but the use of detergents containing chlorine shall be avoided as the chlorine may react with the refrigerant and corrode the copper pipe-work. NOTE: Examples of leak detection fluids are:

- A) bubble method,
- B) fluorescent method agents.

Removal and evacuation

When breaking into the refrigerant circuit to make repairs, or for any other purpose, conventional procedures shall be used. However, for flammable refrigerants, it is important that best practice be followed, since flammability is a consideration. The following procedure shall be adhered to:

- a) safely remove refrigerant following local and national regulations;
- b) purge the circuit with inert gas;
- c) evacuate (optional for A2L);
- d) purge with inert gas (optional for A2L);
- e) open the circuit by cutting or brazing.

The refrigerant charge shall be recovered into the correct recovery cylinders if venting is not allowed by local and national codes. For appliances containing flammable refrigerants, the system shall be purged with oxygen-free nitrogen to render the appliance safe for flammable refrigerants. This process might need to be repeated several times.

Compressed air or oxygen shall not be used for purging refrigerant systems. For appliances containing flammable refrigerants, refrigerants purging shall be achieved by breaking the vacuum in the system with oxygen-free nitrogen and continuing to fill until the working pressure is achieved, then venting to atmosphere, and finally pulling down to a vacuum (optional for A2L). This process shall be repeated until no refrigerant is within the system (optional for A2L). When the final oxygen-free nitrogen charge is used, the system shall be vented down to atmospheric pressure to enable work to take place. Ensure that the outlet for the vacuum pump is not close to any potential ignition sources and that ventilation is available.

Charging procedures

In addition to conventional charging procedures, the following requirements shall be followed:

- Works shall be undertaken with appropriate tools only (in case of uncertainty, please consult the manufacturer of the tools for use with flammable refrigerants).
 - Ensure that contamination of different refrigerants does not occur when using charging equipment. Hoses or lines shall be as short as possible to minimize the amount of refrigerant contained in them.
 - Cylinders shall be kept in an appropriate position according to the instructions.
 - Ensure that the refrigerating system is earthed prior to charging the system with refrigerant.
 - Label the system when charging is complete (if not already).
 - Extreme care shall be taken not to overfill the refrigerating system.
- Prior to recharging the system, it shall be pressure-tested with the appropriate purging gas. The system shall be leak-tested on completion of charging but prior to commissioning. A follow up leak test shall be carried out prior to leaving the site.

Decommissioning

Before carrying out this procedure, it is essential that the technician is completely familiar with the equipment and all its detail. It is recommended good practice that all refrigerants are recovered safely. Prior to the task being carried out, an oil and refrigerant sample shall be taken in case analysis is required prior to re-use of recovered refrigerant. It is essential that electrical power is available before the task is commenced.

- a) Become familiar with the equipment and its operation.
- b) Isolate system electrically.
- c) Before attempting the procedure, ensure that:
 - mechanical handling equipment is available, if required, for handling refrigerant cylinders;
 - all personal protective equipment is available and being used correctly;
 - the recovery process is supervised at all times by a competent person;
 - recovery equipment and cylinders conform to the appropriate standards.
- d) Pump down refrigerant system, if possible.
- e) If a vacuum is not possible, make a manifold so that refrigerant can be removed from various parts of the system.
- f) Make sure that cylinder is situated on the scales before recovery takes place.
- g) Start the recovery machine and operate in accordance with instructions.
- h) Do not overfill cylinders (no more than 80%

volume liquid charge).

i) Do not exceed the maximum working pressure of the cylinder, even temporarily.

j) When the cylinders have been filled correctly and the process completed, make sure that the cylinders and the equipment are removed from site promptly and all isolation valves on the equipment are closed off.

k) Recovered refrigerant shall not be charged into another REFRIGERATING SYSTEM unless it has been cleaned and checked.

Labeling

Equipment shall be labeled stating that it has been decommissioned and emptied of refrigerant. The label shall be dated and signed. For appliances containing FLAMMABLE REFRIGERANTS, ensure that there are labels on the equipment stating the equipment contains FLAMMABLE REFRIGERANT.

Recovery

When removing refrigerant from a system, either for servicing or decommissioning, it is recommended good practice that all refrigerants are removed safely.

When transferring refrigerant into cylinders, ensure that only appropriate refrigerant recovery cylinders are employed.

Ensure that the correct number of cylinders for holding the total system charge is available. All cylinders to be used are designated for the recovered refrigerant and labelled for that refrigerant (i.e. special cylinders for the recovery of refrigerant). Cylinders shall be complete with pressure-relief valve and associated shut-off valves in good working order. Empty recovery cylinders are evacuated and, if possible, cooled before recovery occurs. The recovery equipment shall be in good working order with a set of instructions concerning the equipment that is at hand and shall be suitable for the recovery of all appropriate refrigerants including, when applicable, FLAMMABLE REFRIGERANTS. In addition, a set of calibrated weighing scales shall be available and in good working order.

Hoses shall be complete with leak-free disconnect couplings and in good condition.

Before using the recovery machine, check that it is in satisfactory working order, has been properly maintained and that any associated electrical components are sealed to prevent ignition in the event of a refrigerant release. Consult manufacturer if in doubt.

The recovered refrigerant shall be returned to the refrigerant supplier in the correct recovery

cylinder, and the relevant waste transfer note arranged. Do not mix refrigerants in recovery units and especially not in cylinders.

If compressors or compressor oils are to be removed, ensure that they have been evacuated to an acceptable level to make certain that FLAMMABLE REFRIGERANT does not remain within the lubricant. The evacuation process shall be carried out prior to returning the compressor to the suppliers. Only electric heating to the compressor body shall be employed to accelerate this process. When oil is drained from a system, it shall be carried out safely.

WARNING FOR USING R32 REFRIGERANT

- Appliance shall be installed, operated and stored in a room with a floor area larger than 4 m².
- Appliance shall not be installed in an unventilated space, if that space is smaller than 4 m².
- Compliance with national gas regulations shall be observed.
- The appliance shall be stored so as to prevent mechanical damage from occurring.
- Any person who is involved with working on or breaking into a refrigerant circuit should hold a current valid certificate from an industry-accredited assessment authority, which authorizes their competence to handle refrigerants safely in accordance with an industry recognized assessment specification.
- Servicing shall only be performed as recommended by the equipment manufacturer. Maintenance and repair requiring the assistance of other skilled personnel shall be carried out under the supervision of the person competent in the use of flammable refrigerants.
- Please follow the instruction carefully to handle, install, clear, service the air conditioner to avoid any damage or hazard. Flammable Refrigerant R32 is used within air conditioner. When maintaining or disposing the air conditioner, the refrigerant (R32) shall be recovered properly, shall not discharge to air directly.
- No any open fire or device like switch which may generate spark/arcing shall be around air conditioner to avoid causing ignition of the flammable refrigerant used.
- Please follow the instruction carefully to store or maintain the air conditioner to prevent mechanical damage from occurring.
- Flammable refrigerant -R32 is used in air conditioner. Please follow the instruction carefully to avoid any hazard.

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.

NOTE: If the SUPPLY CORD is damaged, it must be replaced only by a special cord or assembly available from the manufacturer, or its service agent.

These include LCDI Power Cord, part no. 6160405 (208/230v, 15A) and 6160406 (208/230v, 20A)



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.

Indication LEDs

- The touch pad has LEDs that correspond to fan operation and to indicate unit status. The LEDs next to the ON/OFF, FAN, COOL, and HEAT selections indicate which operational mode is active.

High Pressure Protection

- The unit shuts off automatically when the pressure in the system is 700 (± 15) psi or higher, and within 10 minutes after the compressor turns off, the unit will restart when the pressure falls back below 420 (± 15) psi. This protection can effectively avoid bursting and leakage of pipes, lessen system failures and prolong service life.

Low Pressure Protection

- The unit shuts off automatically when the pressure in the system is 40 (± 15) psi or lower, and within 10 minutes after the compressor turns off, the unit will restart when the pressure increases to 95 (± 15) psi or above.

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.

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 Drain Valve equipped

- Automatically drains condensate on heat pump models.

1

NOMENCLATURE & SPECIFICATIONS



EZVV SERIES

EZVV SERIES THRU-THE-WALL/BUILT-IN AIR CONDITIONERS
For New Construction and as Replacement for:
GE AZ Vertical, Friedrich Vert-I-Pak

The EZVV Inverter Heat Pump incorporates state-of-the-art inverter technology, and is designed and manufactured for new construction or the replacement of vertical terminal air conditioning units in an existing building. The technology is the culmination of years of research to develop a VTAC to clearly lead the market with the low energy consumption and low sound levels. Dramatic energy savings and sound reduction is achieved by modulating the output of the VTAC to match the cooling or heating demands of the room, eliminating costly and noisy compressor cycling. We offer our cooling chassis to operate with cooling only, or heat pump with backup electric heat, or just straight electric heat. The design standards, heavy-duty construction, and focus on indoor noise reduction has positioned our unit as the premier unit of the future. Standard warranty is a one year parts and labor including five year compressor part only warranty or a two year parts only including a five year compressor part only warranty.

ACCESSORIES:

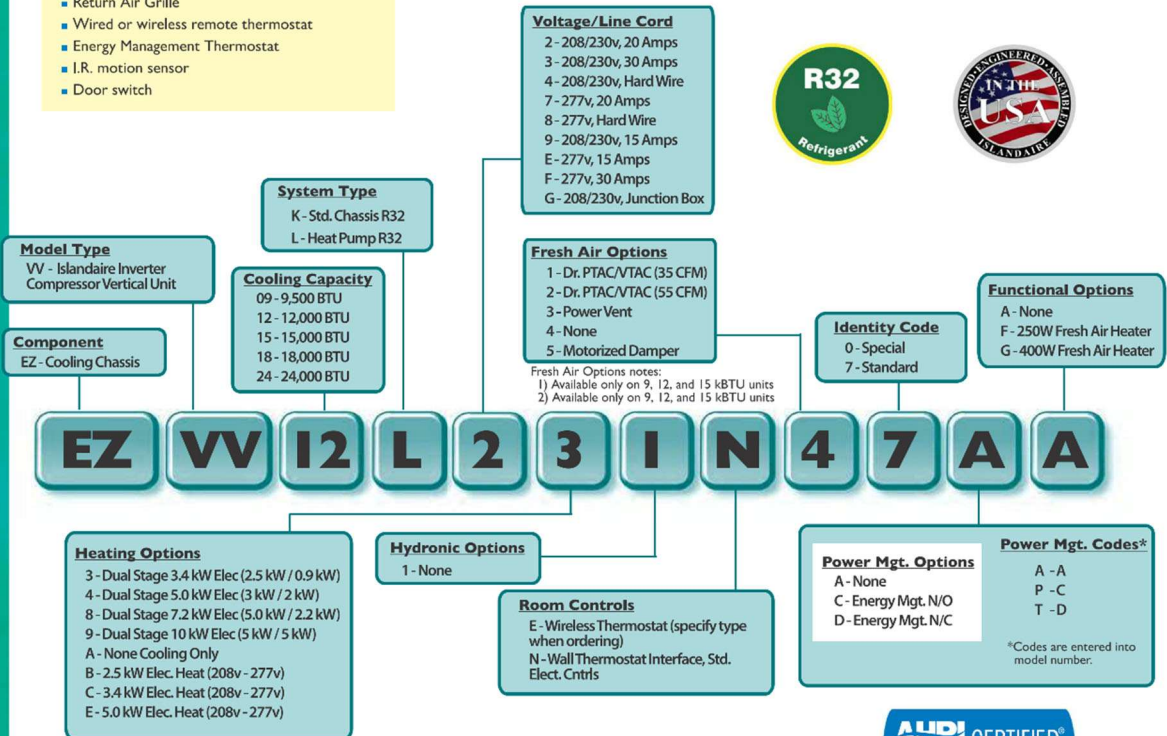
- 18 gauge, powder-coat painted wall plenum
- Air Discharge Plenum Assembly Kit
- Wall Plenum/Drain Pan Kit
- Architectural Louver
- Access Panel (interior)
- Return Air Grille
- Wired or wireless remote thermostat
- Energy Management Thermostat
- I.R. motion sensor
- Door switch

OPTIONS:

- Up to 55 CFM Continuously Conditioned make up air
- 250W or 400W fresh air heater
- Motorized fresh air damper
- Power Vent

FEATURES:

- Superior temperature control
- Dehumidification of room air
- Quiet and energy-efficient compressor
- Dual High-efficiency DC Fan Motors
- Conventional thermostat compatible for heat pump applications
- Dual-Stage electric heat element option
- Front desk control capable
- Motion sensor/door switch capable
- Compressor freeze protection
- Self-diagnosis
- Random Auto Re-start
- Compressor time delay
- Room side freeze protection
- Power service disconnect
- Washable air filter



*Specifications are subject to change due to ongoing product development.



500 Middle Country Road, St. James, NY 11780 • 1-800-886-2759
e-mail: sales@islandaire.com • www.islandaire.com
Ph: 631-471-2900 • Fax: 631-471-2913

6140627 Rev. - (03/13/26)



EZV SERIES

	EZ09		EZ12		EZ15		EZ18		EZ24	
VOLTS	208 / 230	277	208 / 230	277	208 / 230	277	208 / 230	277	208 / 230	277
BTUH COOL	9,600 / 9,600	9,600	12,600 / 12,600	12,600	15,000 / 15,000	15,000	18,300 / 18,300	18,300	22,000 / 22,000	22,000
CAPACITY RANGE	5,700-10,100	5,700-10,100	5,700-13,000	5,700-13,000	7,400-15,800	7,400-15,800	8,600-18,900	8,600-18,900	10,300-22,500	10,300-22,500
AMPS COOL	4.40 / 4.00	3.14	5.40 / 4.90	3.97	7.40 / 6.70	5.22	9.20 / 8.30	6.82	11.60 / 10.50	8.66
WATTS COOL	870 / 870	870	1,100 / 1,100	1,100	1,445 / 1,445	1,445	1,890 / 1,890	1,890	2,400 / 2,400	2,400
EER2	11.0 / 11.0	11.0	11.1 / 11.1	11.1	10.4 / 10.4	10.4	9.7 / 9.7	9.7	9.2 / 9.2	9.2
SEER2	13.8 / 13.8	13.8	14.4 / 14.4	14.4	13.7 / 13.7	13.7	12.8 / 12.8	12.8	12.8 / 12.8	12.8
CFM HIGH (SP 0.1")	465 / 465	465	465 / 465	465	465 / 465	465	565 / 565	565	700 / 700	700
CFM LOW (SP 0.1")	305 / 305	305	305 / 305	305	390 / 390	390	525 / 525	525	610 / 610	610
BTUH HEAT	9,800 / 9,800	9,800	12,300 / 12,300	12,300	14,300 / 14,300	14,300	18,000 / 18,000	18,000	20,000 / 20,000	20,000
CAPACITY RANGE	5,900-10,500	5,900-10,500	5,900-12,800	5,900-12,800	7,300-15,300	7,300-15,300	11,000-18,700	11,000-18,700	11,000-20,900	11,000-20,900
AMPS HEAT	4.00 / 3.60	2.90	5.50 / 5.00	4.03	6.70 / 6.10	4.73	8.00 / 7.20	5.90	9.20 / 8.30	6.81
WATTS HEAT	810 / 810	810	1,115 / 1,115	1,115	1,310 / 1,310	1,310	1,640 / 1,640	1,640	1,885 / 1,885	1,885
C.O.P.	3.3 / 3.3	3.3	3.2 / 3.2	3.2	2.7 / 2.7	2.7	3.2 / 3.2	3.2	3.1 / 3.1	3.1
HSPF2 (IV)	6.6 / 6.6	6.6	6.5 / 6.5	6.5	6.4 / 6.4	6.4	7.1 / 7.1	7.1	7.1 / 7.1	7.1
HSPF2 (V)	5.4 / 5.4	5.4	5.3 / 5.3	5.3	5.2 / 5.2	5.2	5.6 / 5.6	5.6	5.5 / 5.5	5.5
INDOOR NOISE (dbA) Cooling	55/47/45	55/47/45	55/49/46	55/49/46	55/49/46	55/49/46	55/55/54	55/55/54	55/55/54	55/55/54
OUTDOOR NOISE (dbA) Cooling	62/59	62/59	64/60	64/60	64/62	64/62	64/62	64/62	64/62	64/62
SHIPPING WT.	128	128	128	128	128	128	207	207	207	207

Heating Option	Voltage ⁽¹⁾	Wattage	BTU/h	Amps ⁽²⁾
3	208	2,780	9,500	13.37
	230	3,400	11,600	14.78
	277	3,600	12,300	13.00
4	208	4,090	14,000	19.66
	230	5,000	17,100	21.74
	277	5,000	17,100	18.05
8	208	5,890	20,100	28.31
	230	7,200	24,600	31.30
	277	10,445	35,600	37.70
9	208	8,180	27,900	39.32
	230	10,000	34,100	43.48
	277	14,505	49,500	52.36
B	208	2,045	7,000	9.83
	230	2,500	8,500	10.87
	277	2,500	8,500	9.03
C	208	2,780	9,500	13.37
	230	3,400	11,600	14.78
	277	3,600	12,300	13.00
E	208	4,090	14,000	19.66
	230	5,000	17,100	21.74
	277	5,000	17,100	18.05

Where applicable, cooling capacities are specified at conditions of 95 °F DB/75 °F WB (35 °C DB/24 °C WB) outdoor and 80 °F DB/67 °F WB (27 °C DB/19 °C WB) indoor and heating capacities are specified at conditions of 47 °F DB/43 °F WB (8 °C DB/6 °C WB) outdoor and 70 °F DB/60 °F WB (21 °C DB/16 °C WB) indoor in accordance with AHRI 310/380 and CSA C744 standards. Wattage, Amperage, EER, and COP listings include compressor, evaporator motor and condenser fan motor. The above ratings are a typical heat pump style unit.

Line Voltage	Maximum Amperage	Wall Socket Configuration	Receptacle Number	Electrical Heat Options
208/230	12		NEMA 6-15R	2.5
208/230	16		NEMA 6-20R	3.4
208/230	24		NEMA 6-30R	4.2 - 5.0
277	16		NEMA 7-20R	2.5 - 4.2
277	24		NEMA 7-30R	5.0

⁽¹⁾ Voltage is Single Phase, Alternating Current and R.M.S.

⁽²⁾ Amp values are for heating element only.

*Specifications are subject to change due to ongoing product development.



500 Middle Country Road, St. James, NY 11780 • 1-800-886-2759

e-mail: sales@islandaire.com • www.islandaire.com

Ph: 631-471-2900 • Fax: 631-471-2913

2 RECEIVING UNITS

Upon receipt of equipment, check carton for any visible damage. Make a notation on the shipper's delivery ticket of any damage before signing. If there is any evidence of rough handling, the cartons should be opened at once to check for concealed damage. If any damage is found, notify the carrier within 48 hours to establish your claim, and request an inspection report from the carrier. The warranty claims department should then be contacted.

Do not store or transport the unit on end. For proper storing, each carton is marked with "up" arrows. Upon receipt of this equipment, if you notice that the units were not stacked properly during transportation, make a notation on the shipper's delivery ticket, and be sure the unit is in normal upright position 24 hours before operating.

In the event that elevator transfer makes up-ended positioning unavoidable, absolutely ensure that the unit is in the normal upright position for at least 24 hours before operating. **IGNORING THIS INSTRUCTION MAY VOID THE WARRANTY.** The units must be handled with care at all times. Rough handling can damage internal electrical and refrigeration components.

3 INSTALLATION NOTES

- 1-** Installation and maintenance should be carried out by qualified personnel who are familiar with local codes and regulations and are experienced with this type of equipment.
- 2-** Electrical power must be disconnected during installation or service.
- 3-** Ensure drapes, beds, bedspreads, furniture, etc., **DO NOT** block either the return or discharge air opening.
- 4-** Inspect the existing wall case (if present) to ensure it is not damaged and that it is securely mounted in the wall. Use a level gauge to ensure the case is pitched properly. Be sure that any gaskets originally mounted on the wall case that are missing or worn are replaced.
- 5-** A Space Constrained unit must reject its heat to the outside air in cooling mode. As a result, any obstruction that impedes this heat transfer will shorten compressor life. Issues related to compressor failure as a result of these conditions will not be covered under warranty.
- 6-** Ensure there is adequate clearance for servicing and proper operation. Provide additional space for a service technician to work on the unit.
- 7-** All electrical connections and circuits must be installed in compliance with and conform to the National Electrical Code (USA), Canadian Electrical Code (Canada), and local codes having jurisdiction.
- 8-** To prevent damage, this unit should **NOT** be operated to provide supplementary heating and cooling during construction. The unit is designed for operation in a normal indoor environment. Operating this unit in unenclosed space and/or exposure to construction environment may result in permanent damage.
- 9-** Inspect the unit specification label in order to identify the model number. At this time, voltage, capacity, and other special features should be noted.
- 10-** Be sure that the amperage of the dedicated electrical service to the unit is correct. Use of an extension cord is **NOT** recommended and will void warranty (refer to Table 1).
- 11-** This unit is designed for single room use only.

4

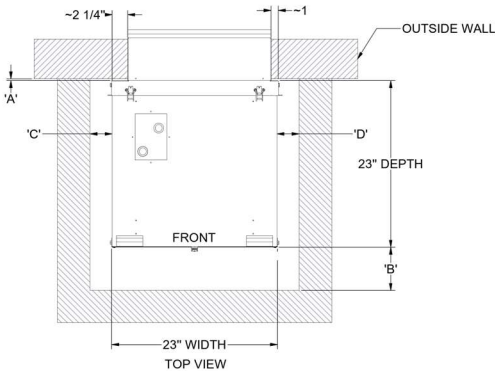
MINIMUM CLEARANCES

This unit must be installed in accordance with all applicable codes. Ensure that there is adequate clearance for servicing and proper operation. A minimum clearance of ‘B’ inches (see table below) in front of the return air is required. Provide additional space for the service technician to work on the unit. Ensure that drapes, beds, bedspreads, furniture, etc., DO NOT block either the return or discharge air openings.

Your airflow should be balanced based on many factors, such as available ESP, room CFM, and duct work. Consult an HVAC engineer for proper applications. Higher CFMs tend to increase sensible capacity, enhance room circulation and increase duct noise, while lower CFMs tend to increase latent capacity and reduce noise.

Dimensional Drawing (Unit Top View)

DIMENSIONS TABLE			
DIM.	FRONT INSTALL.	RIGTH SIDE INSTALL.	LEFT SIDE INSTALL.
A	SEE NOTES	SEE NOTES	SEE NOTES
B	6" MIN.	8" MIN.	8" MIN.
C	3" MIN.	3" MIN.	4" MIN.
D	3" MIN.	4" MIN.	3" MIN.

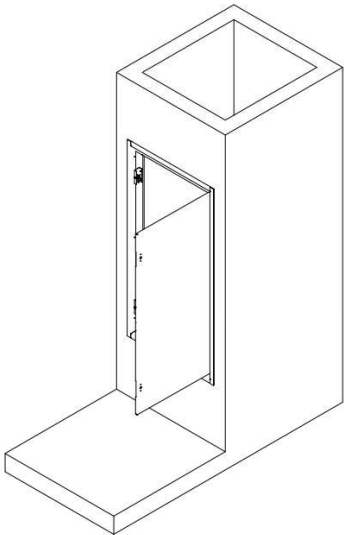


Important Notes

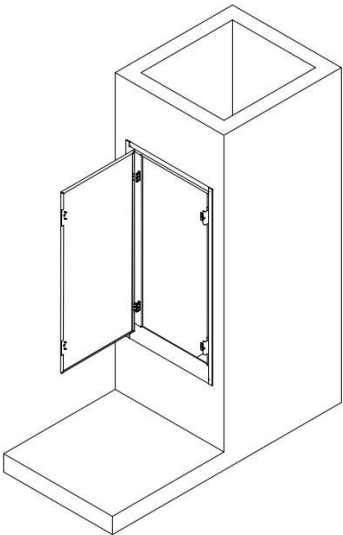
‘A’ dimension determined by wall thickness and plenum size selected minimum ¼”.

‘B’ dimension minimum 6” for front installation and 8” for side installation

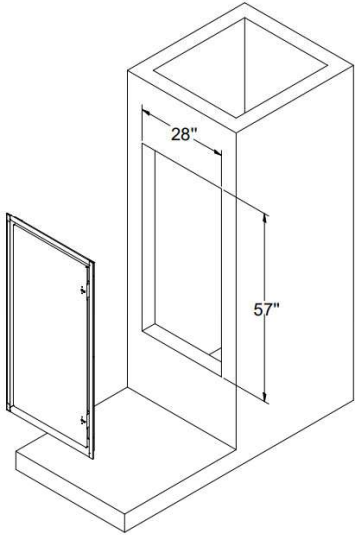
‘C’ dimension for front installation is a minimum of 3”. For side installation, the ‘C’ and ‘D’ dimensions are 3” and 4” depending on the side, with 4” always on the door side and 3” on the wall side.



DOOR OPEN TO THE RIGHT



DOOR OPEN TO THE LEFT

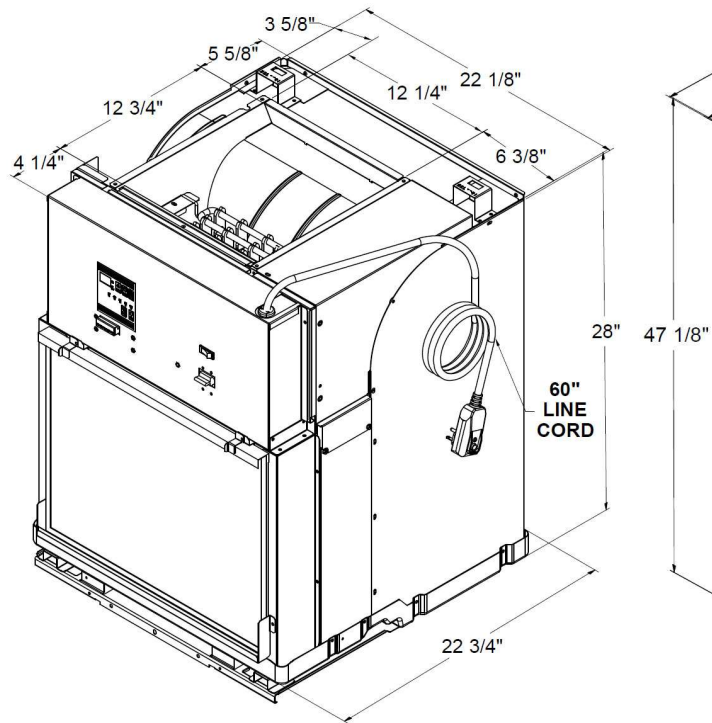


DOOR CUT OUT DIMENSIONS

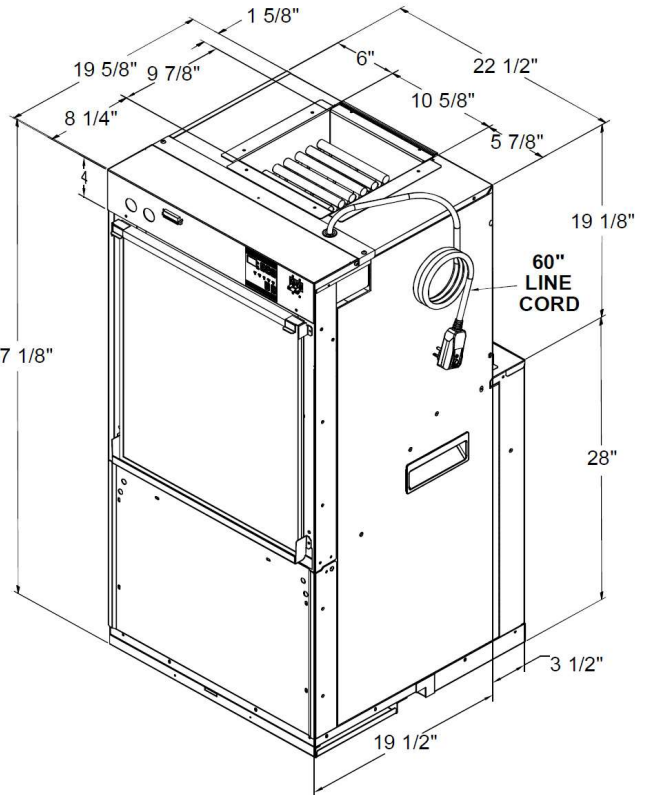
RECOMMENDATION: CENTER THE DOOR IN WIDTH AND HEIGHT WITH THE UNIT

Door minimum cut-out to be 28” height x 57” width. Note that the door can be installed to open either to the right or left

EZVV SERIES 9K, 12K, 15K BTU



EZVV SERIES 18K, 24K BTU

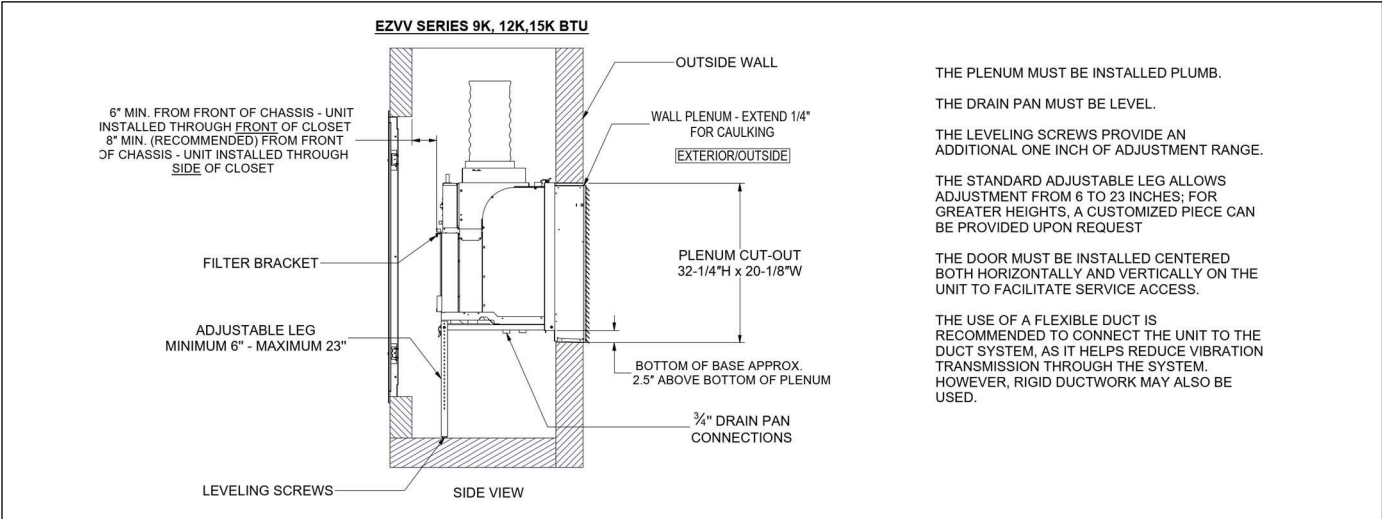


Outdoor Clearances

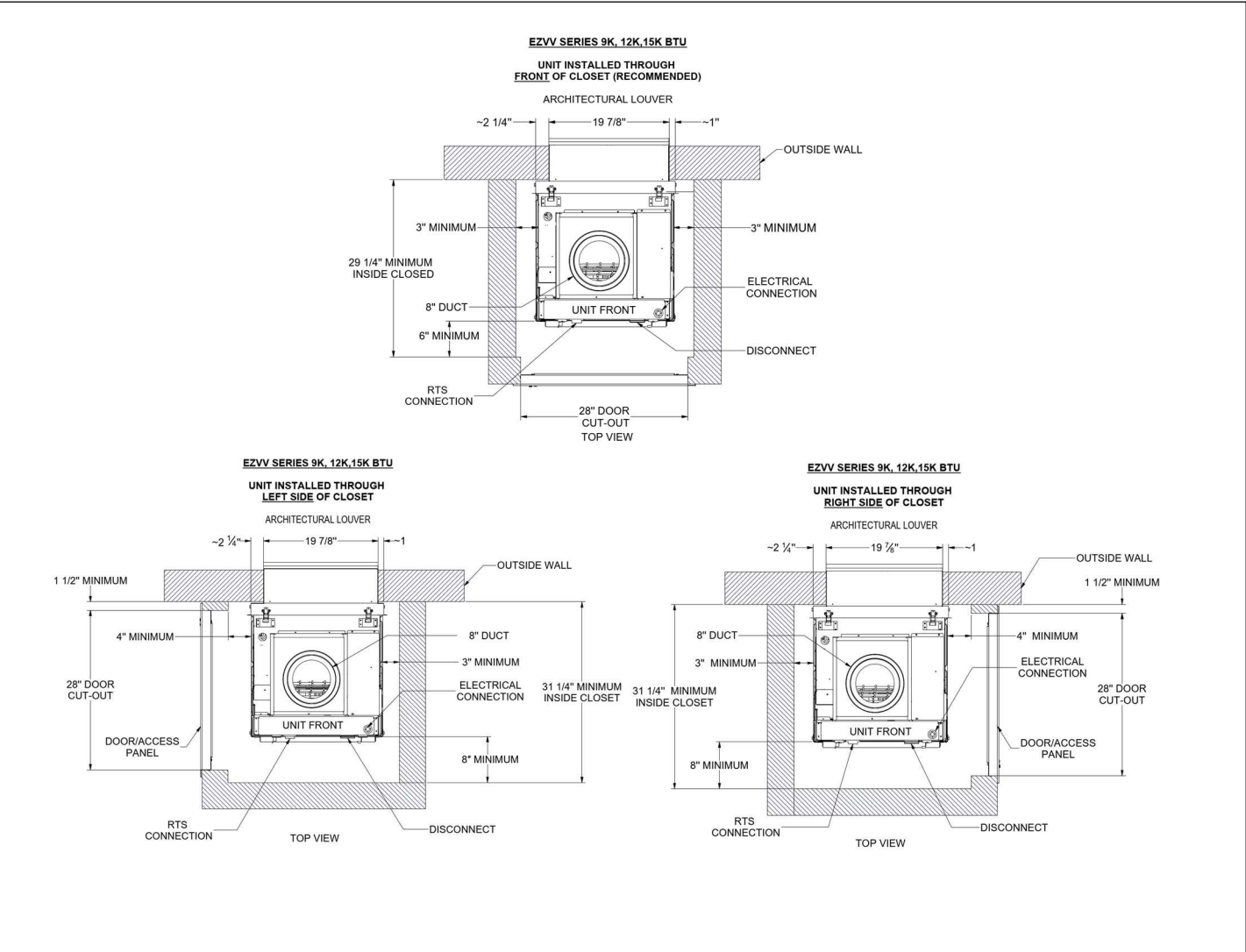
The following minimum outside clearance from rear grille must be maintained:

- Rear unit to nearest obstruction - 36"
- Side of unit to nearest obstruction - 0"
- Bottom of unit to obstruction and/or ground: This requirement is determined by local climate and environmental conditions. The unit must be above ground and high enough off of the ground to prevent snow, water, leaves or any other obstruction from blocking rear of unit, 8" minimum off floor recommended dimension.

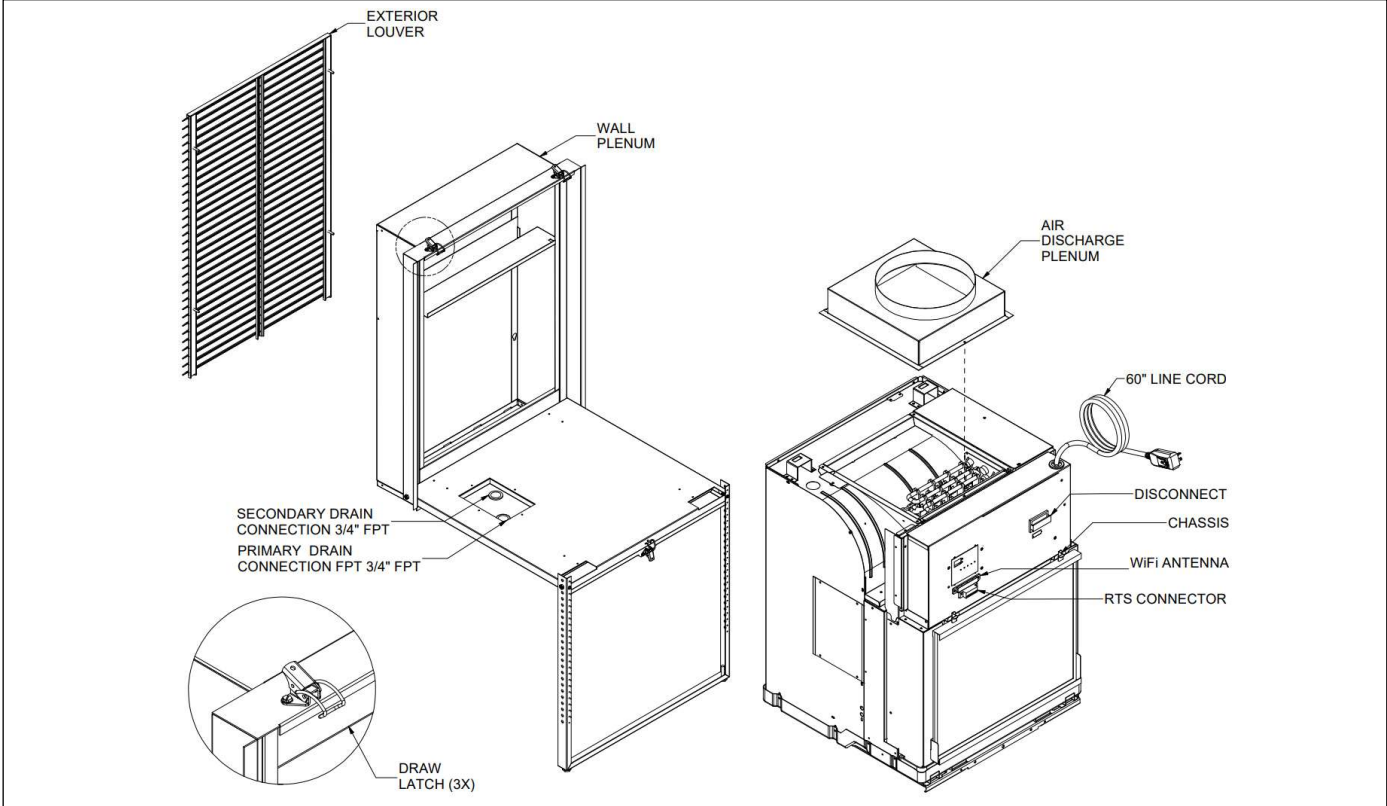
Chassis Location – EZVV SERIES 9K, 12K, 15K BTU (Side View)



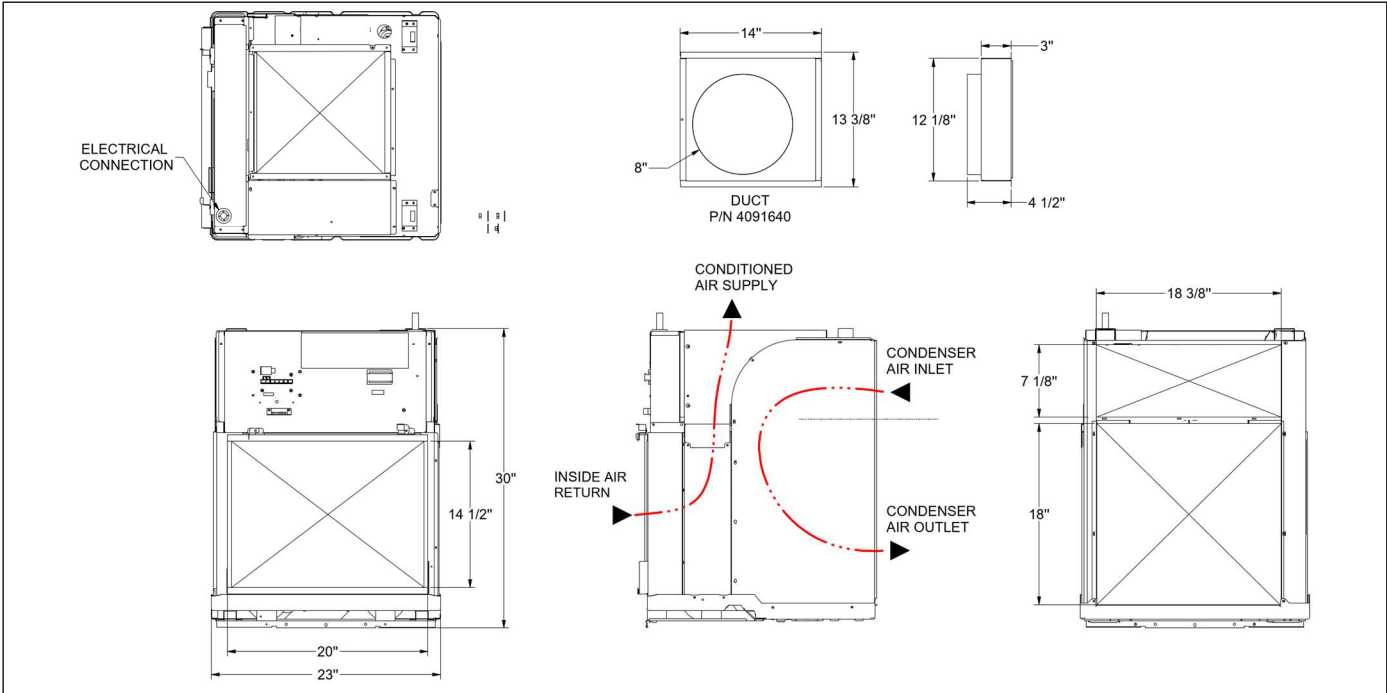
Chassis Location Based on Door Position – EZVV SERIES 9K, 12K, 15K BTU (Top View)



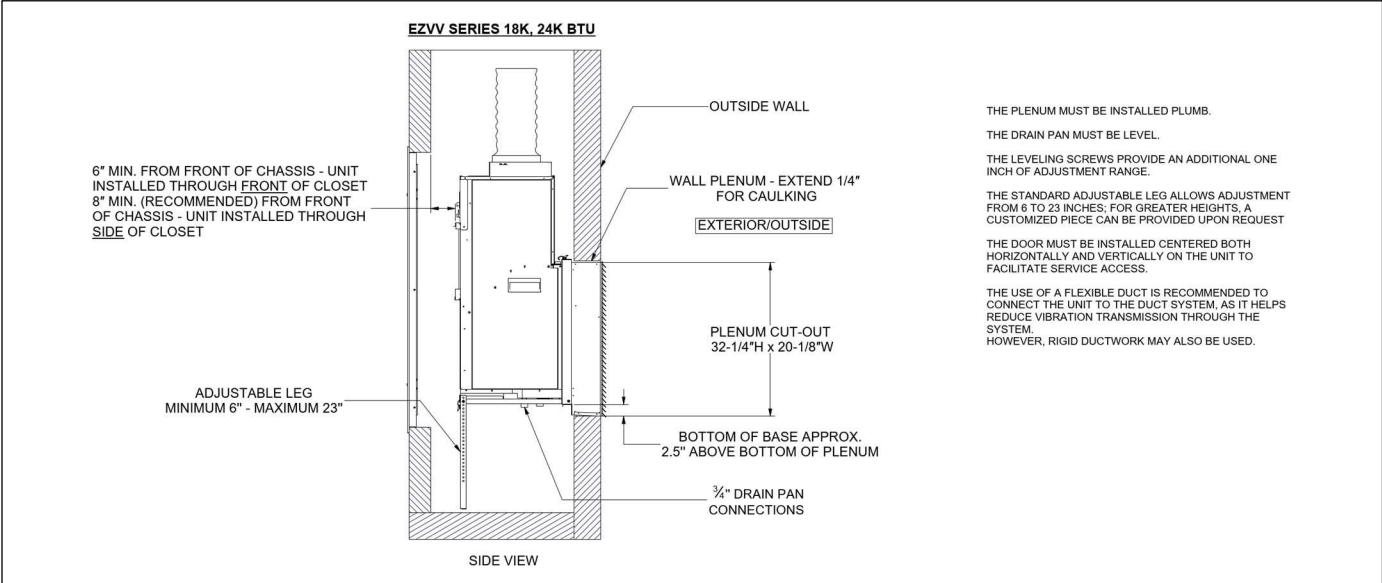
EZVV SERIES 9K, 12K, 15K BTU



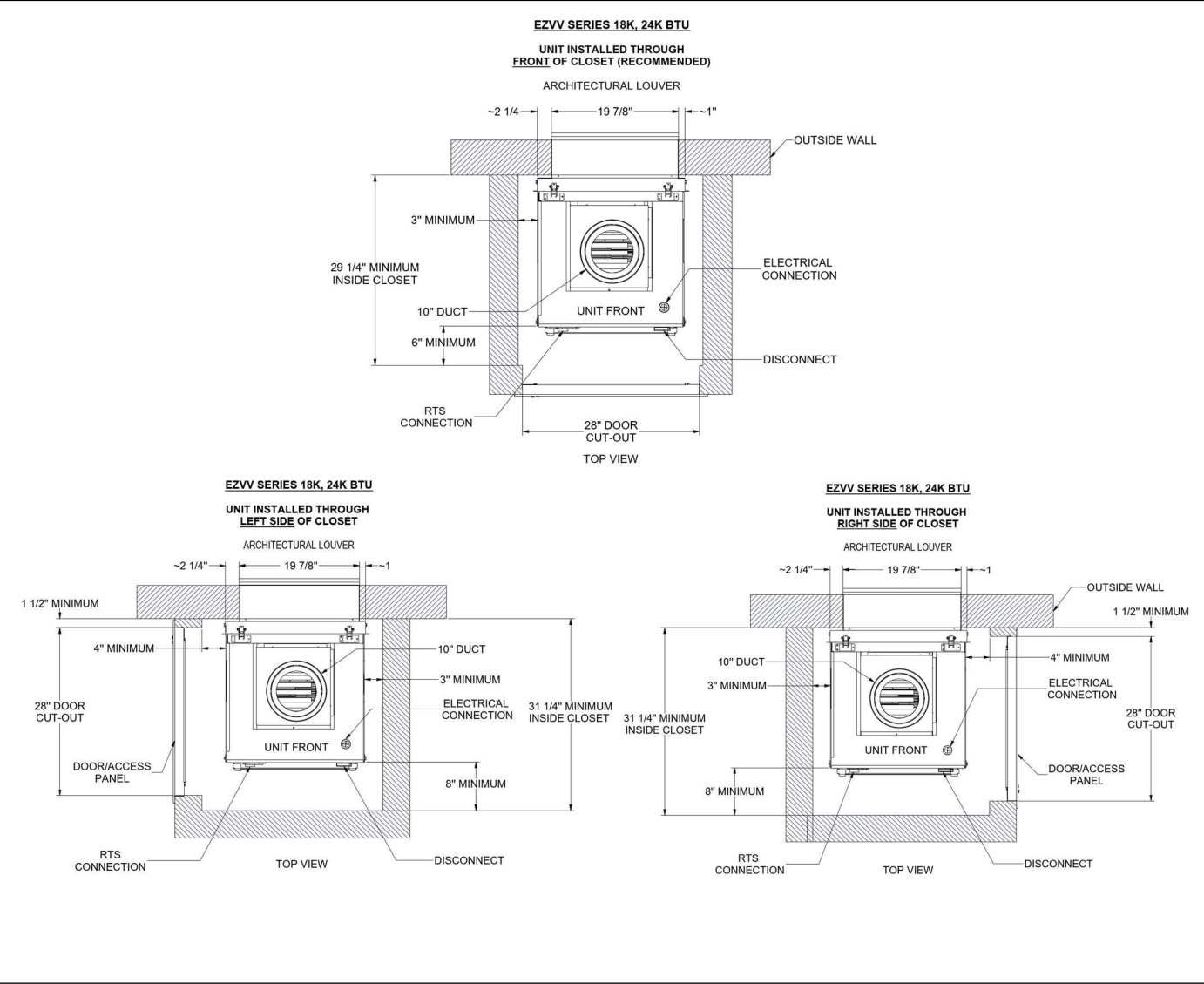
EZVV SERIES 9K, 12K, 15K BTU DIMENSIONAL DATA



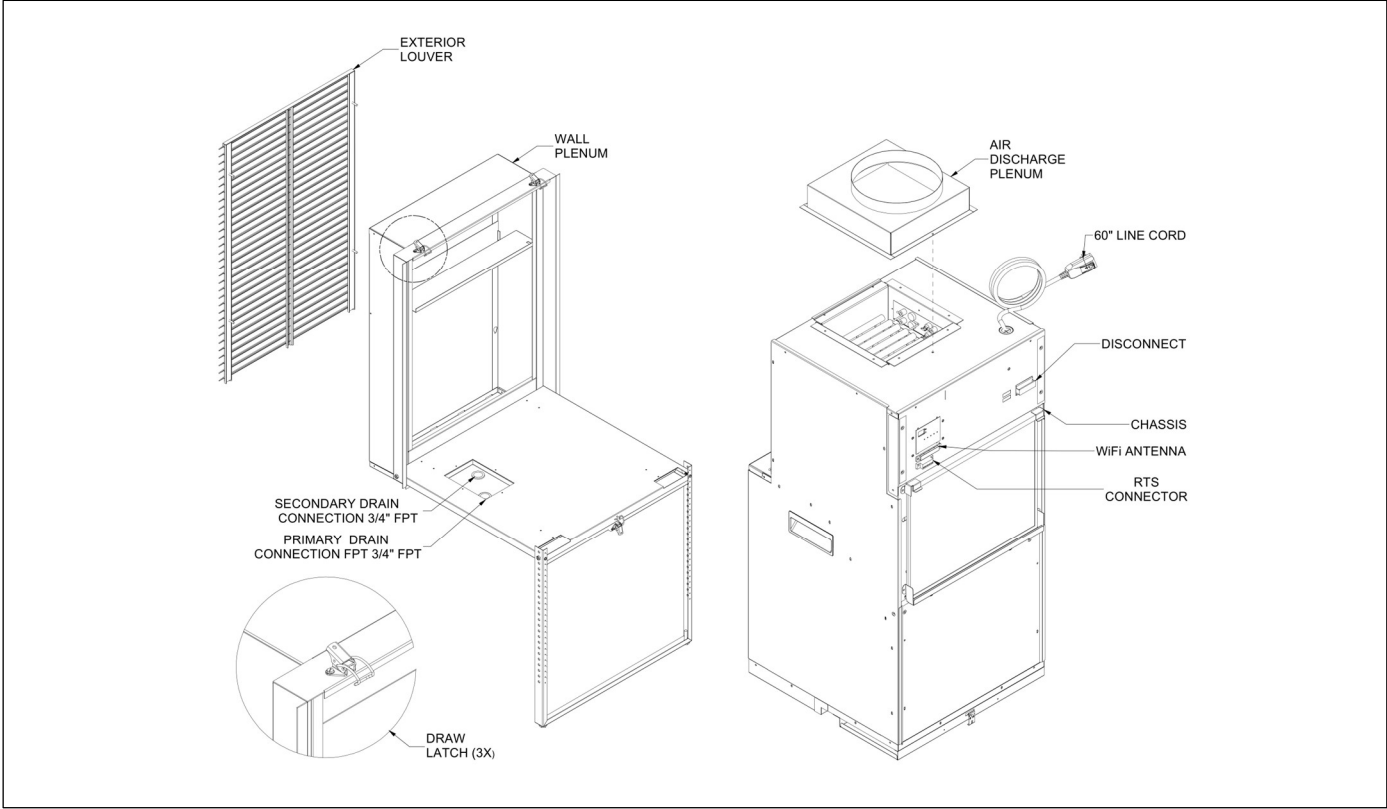
Chassis Location – EZVV SERIES 18K, 24K BTU (Side View)



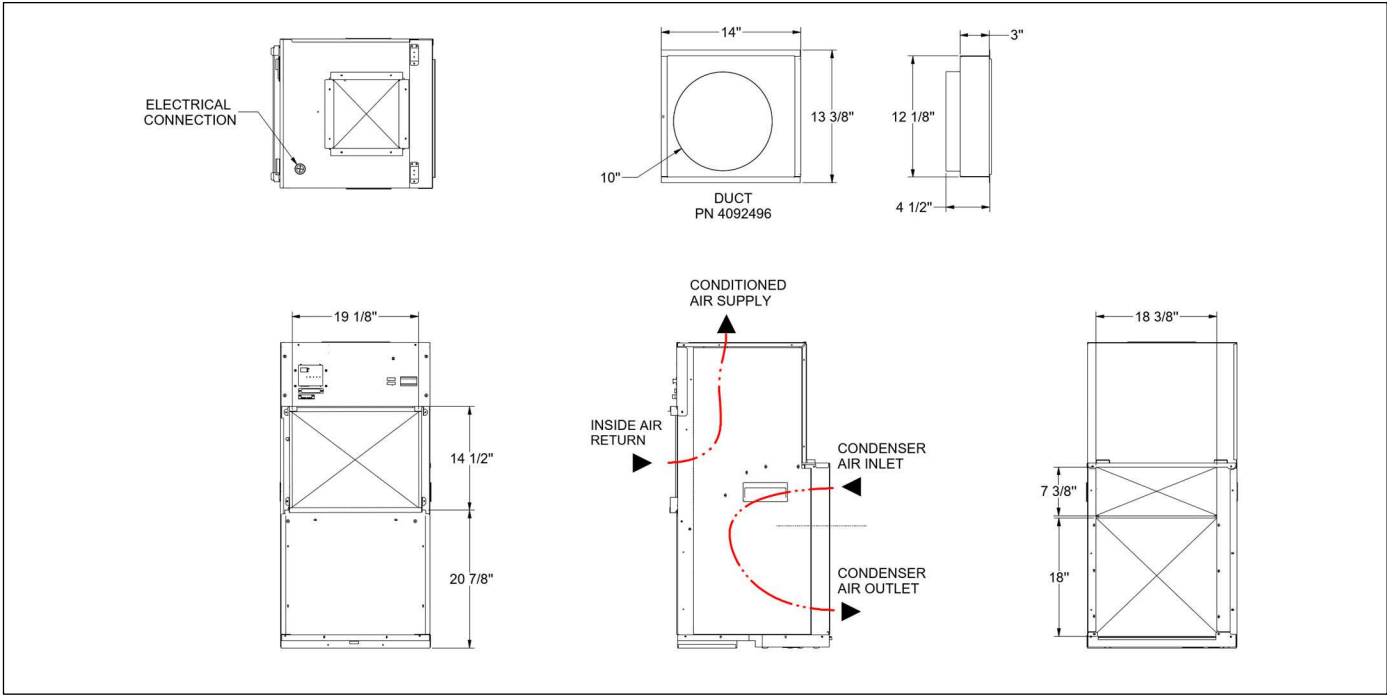
Chassis Location Based on Door Position – EZVV SERIES 18K, 24K BTU (Top View)



EZVV SERIES 18K, 24K BTU



EZVV SERIES 18K-24K BTU
DIMENSIONAL DATA



5

INSTALLATION INSTRUCTIONS

Overview

 **CAUTION!** To prevent damage, this unit should NOT be operated to provide supplementary heating and cooling during the construction period. The unit is designed for operation in a normal indoor environment. Operating this unit in an unenclosed space or exposure to construction environment may result in permanent equipment damage.

The following is the sequence of steps for installing the Islandaire Space Constrained Products unit:

1. Install Wall Plenum	7. Connect The Top Duct
2. Install Exterior Louver	8. Unit Power Connection
3. Attach Base Pan and Adjustable Legs	9. Hardwire Connection.
4. Install Drain Connections	10. Voltage Measurements
5. Mount Chassis on Base Pan/Secure to Plenum	11. Electrical Circuit Ratings
6. Attach Air Discharge to Plenum	12. Remote Wall Mounted Thermostat

1. Install Wall Plenum

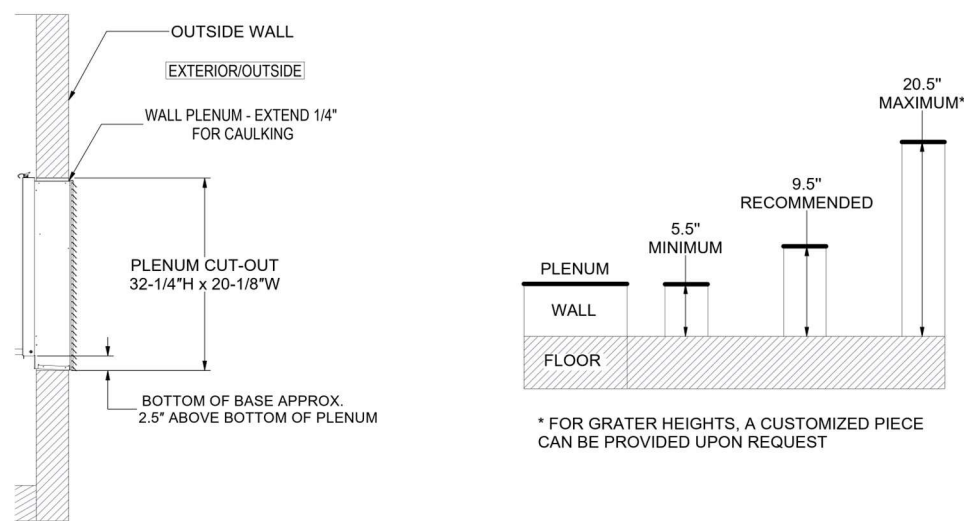
Since the Space Constrained Products unit itself does not install in the wall opening, the use of a wall plenum is necessary to contain and separate the outdoor air paths to prevent the discharge of air from being drawn back into the unit. The plenum must be able to hold water in the bottom without leaking into the wall cavity.

The installation of flashing, with a 45° drip lip, is recommended below the plenum.

The plenum is not loadbearing, so a proper header needs to be installed above the plenum just as over any window opening in the wall. If the building construction is brick, concrete block, or other non-self-supporting material, a lintel must be installed over the plenum opening.

The plenum is to be installed plumb, square, and level in the opening and secured to the wall construction with screws or nails in the sides located at a minimum of 2" from the bottom of the plenum. No nails or screws may be used in the bottom or top of the plenum to prevent water from entering the wall cavity. The plenum must be caulked (on all four sides) along the outdoor wall face and along the interior wall to prevent air infiltration and water intrusion.

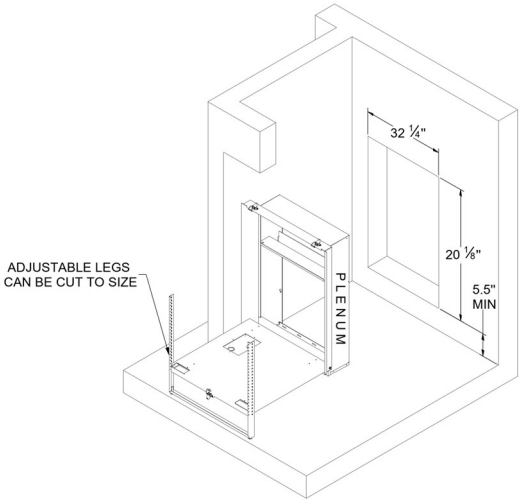
The wall opening location for the plenum must extend 2.5" below the bottom of the provided drain pan. Since the unit must be at a minimum of 8" off the floor, the cutout for the plenum must be at a minimum of 5.5" from the finished floor. It is recommended to install the unit 12" off the floor, this would result in a plenum cut out distance from the floor of 9.5".



Plenum Options

Islandaire offers five plenum depths; the choice of the correct plenum is determined by the thickness of the building's exterior wall. Each plenum is 19 7/8" wide by 32" high and requires a 20 1/8" wide by 32 1/4" high cutout in the wall.

PLENUM AVAILABE SIZES	
4091635	*Type 1: 6"D × 19 7/8"W × 32"H
4091651	*Type 2: 8"D × 19 7/8"W × 32"H
4091652	*Type 3: 10"D × 19 7/8"W × 32"H
4091653	*Type 4: 12"D × 19 7/8"W × 32"H
4091654	*Type 5: 15"D × 19 7/8"W × 32"H

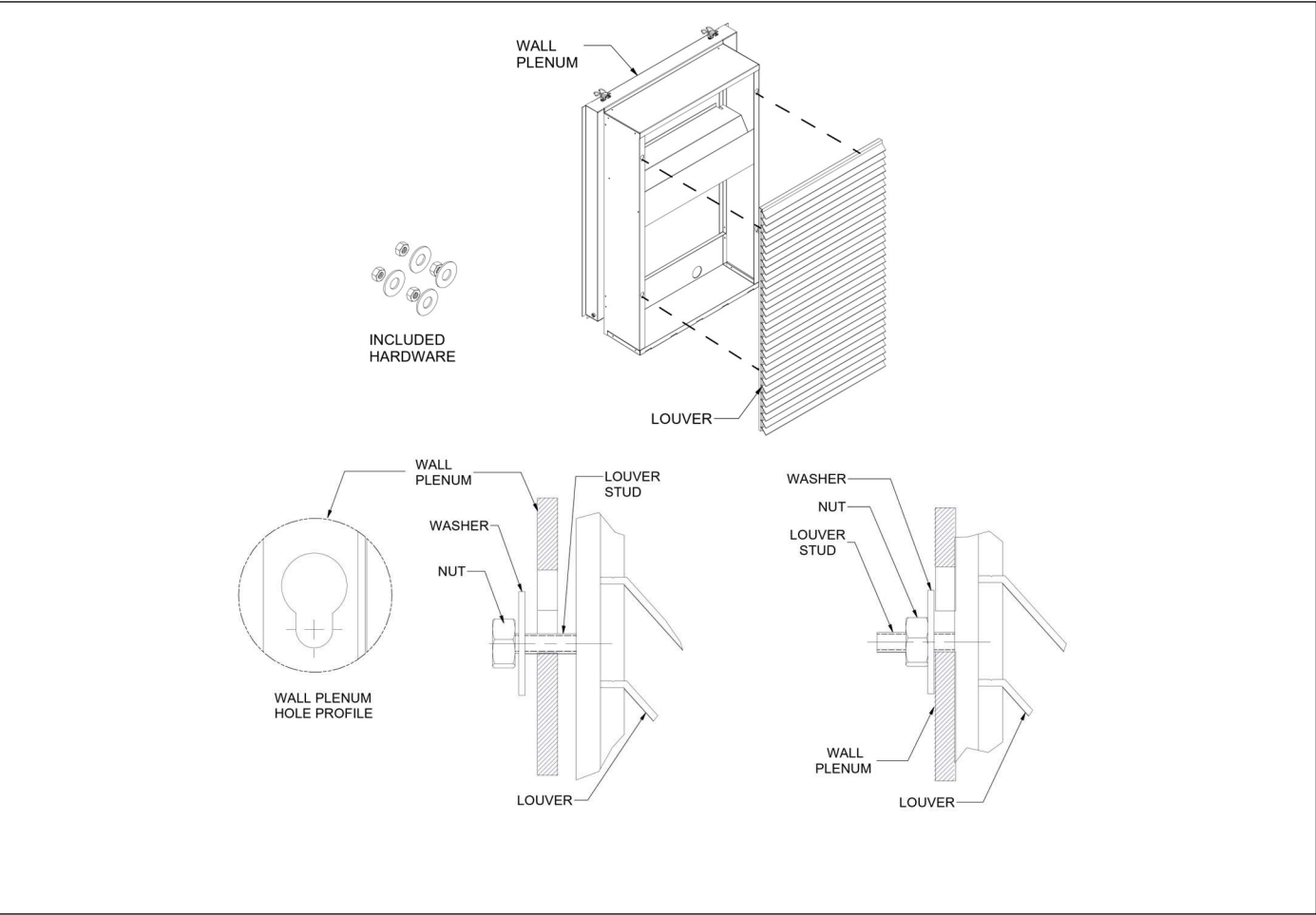


Prepare the closet supply air duct work for later connection to the case. Plenum duct should be insulated to prevent condensation and to reduce air noise.

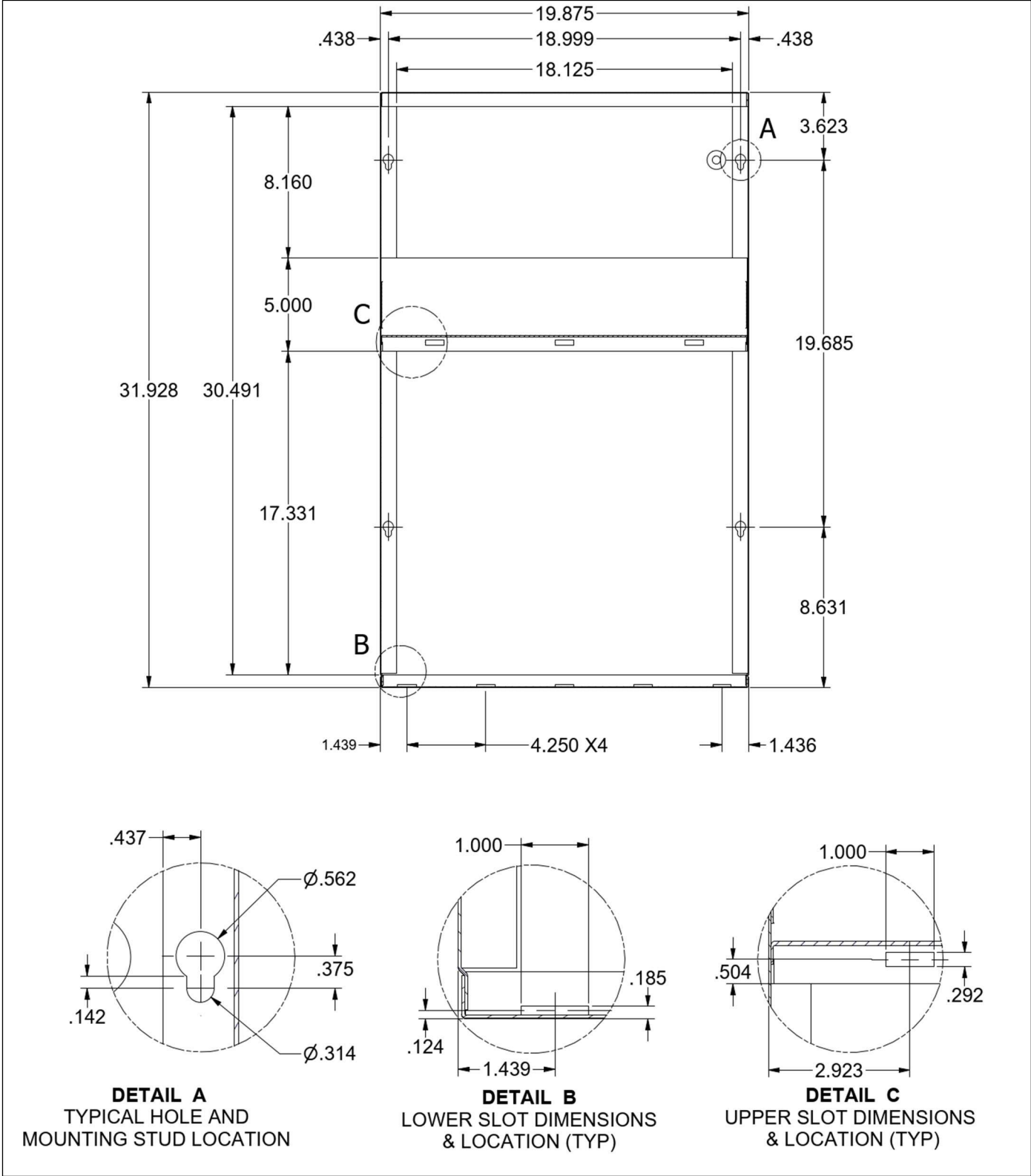
2. Install Exterior Louver

WARNING:
If installing the louver after the plenum, ensure a **safety line** is securely anchored to a fixed structure to prevent the louver from falling during attachment.

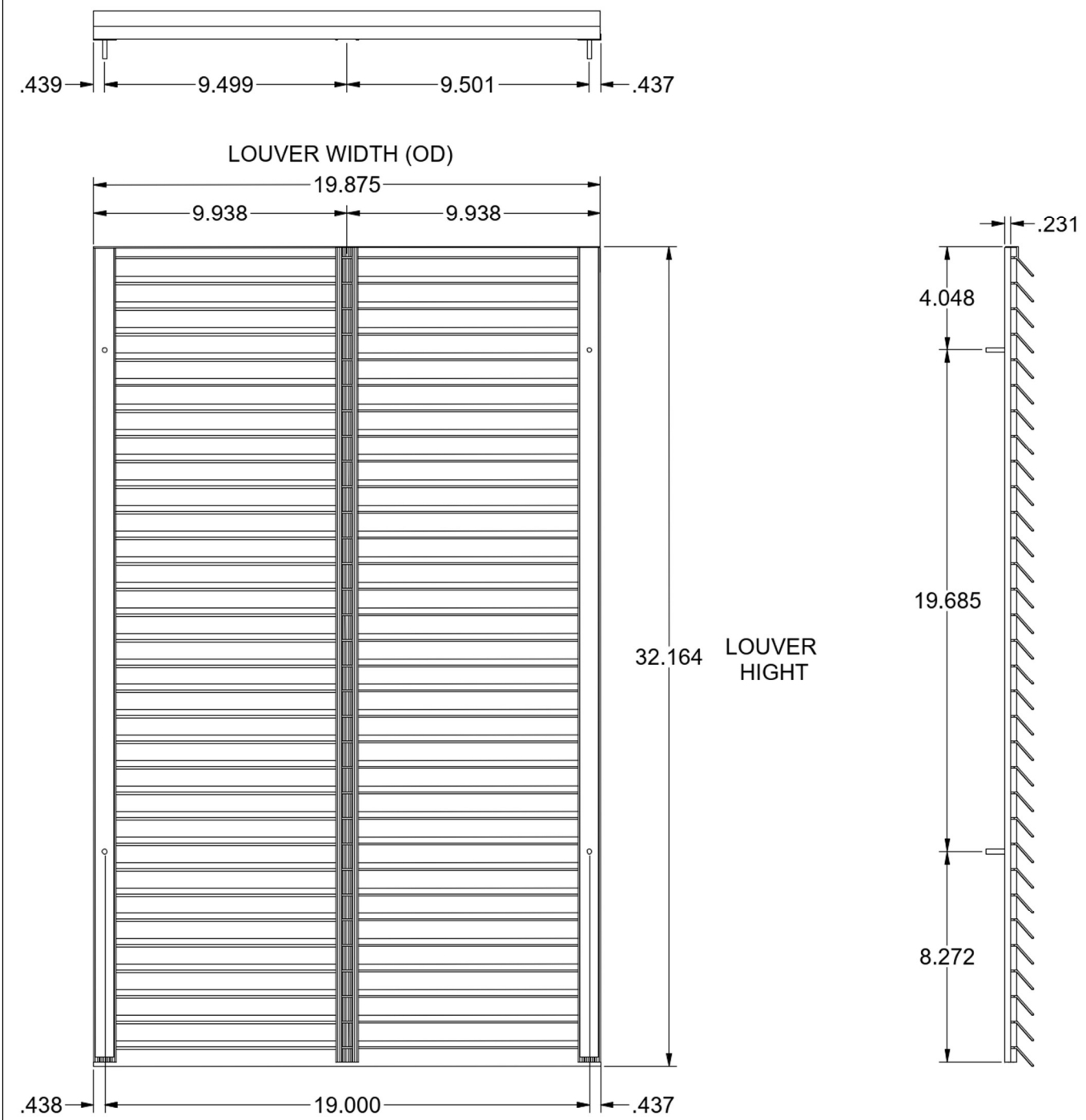
- 1. Install one washer on each stud and thread one hex nut onto each stud, engaging approximately 1/4 of the thread length.
- 2. Insert the studs through the corresponding mounting holes in the plenum wall. Position the plenum wall between the washer and the first hex nut.
- 3. Tighten the hex nuts to securely fasten the louver to the plenum wall.



WALL PLENUM FROM OUTSIDE WALL VIEW



DETAIL: LOUVER



3. Attach Base Pan and Adjustable Legs

1. Place the base pan inside the utility closet, ensuring sufficient clearance between the unit and the interior surfaces of the walls, door, or panel as specified below.

NOTE:

When determining the required closet depth, consider that the plenum may protrude into the closet opening. Plenum depth may exceed the exterior wall thickness depending on the installation configuration.

• **Front installation:**

Provide a minimum clearance of 6" from the front of the platform to the inside surface of the closet door, and 3" minimum clearance from each side of the unit.

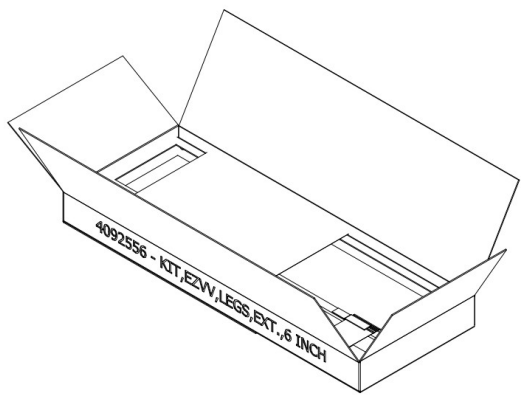
• **Side installation:**

Provide a minimum clearance of 8" from the front of the unit, 4" minimum clearance on the door side, and 3" minimum clearance on the opposite wall side

3.1 Install Extension to Adjustable Legs (Optional Accessory)

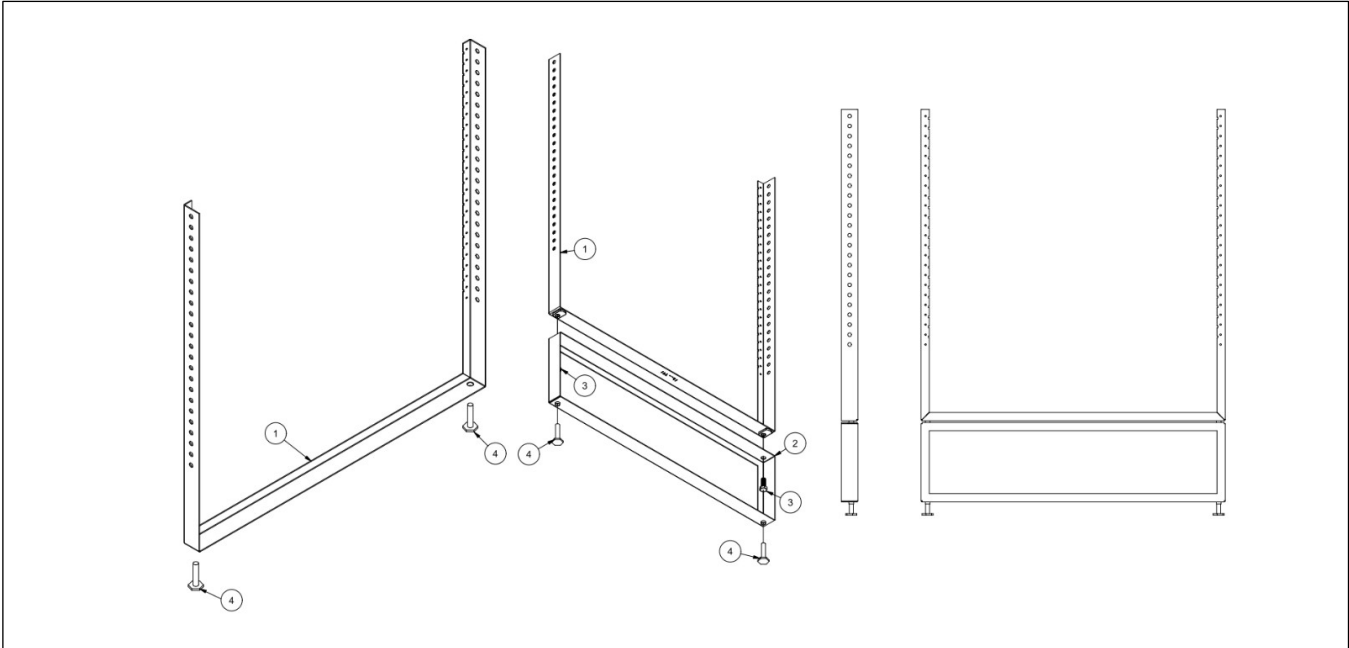
Only If you have purchased our Extension, please follow the extension installation steps:

- 1. Unpackage the parts.

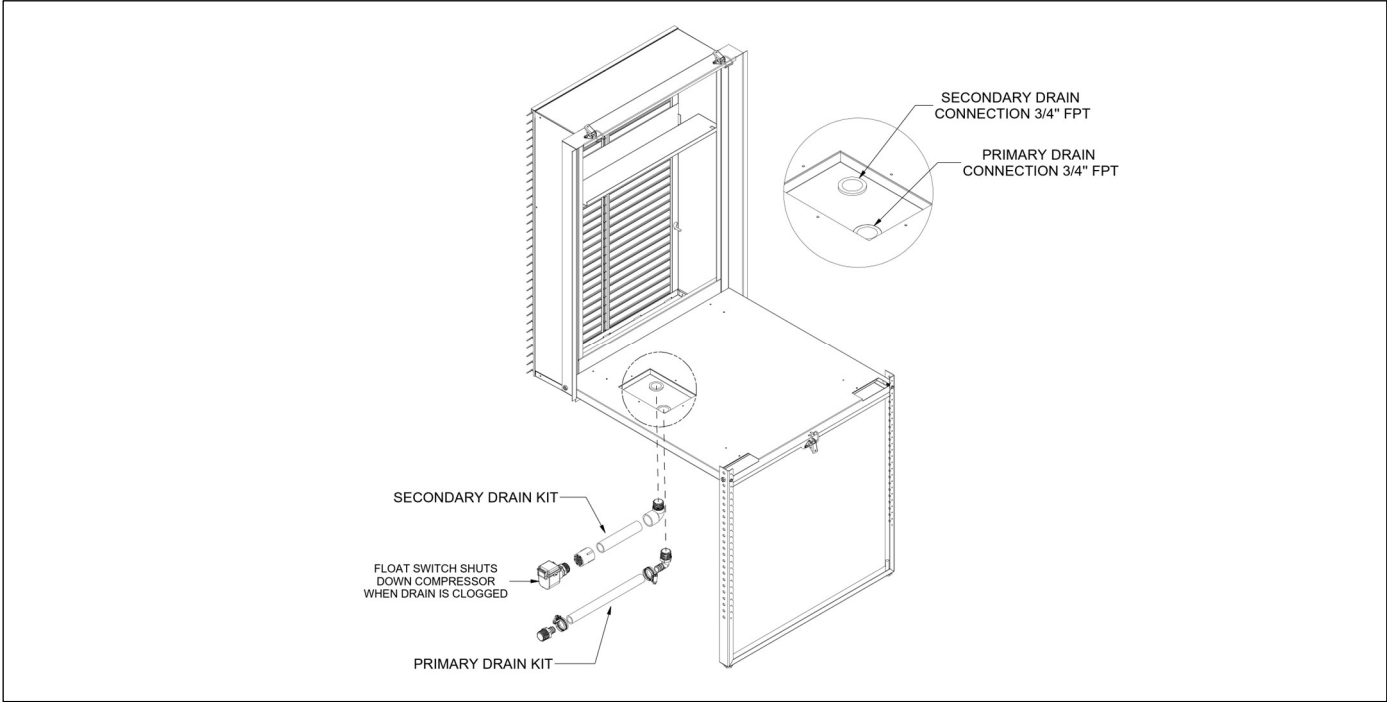


EZV - EXTENSION	
ITEM	DESCRIPTION
1	BRACKET, VR/VP, LEGS
2	BRACKET, EZVV, LEGS, EXT.,6 INCHES
3	BOLT, 5/16-18 X 1 3/4, HEX HEAD TAP
4	LEVELER, 5/16-18 X1.5"L

- 2. Unfasten both levelers (Item 4) from original legs (Item 1).
- 3. Fasten extension (Item 2) to original legs (Item 1) with bolt (Item 3), 2x.
- 4. Fasten levelers (Item 4) in place to bottom of extension (Item 2) where weld nuts are.



4. Install Drain Connection(s)



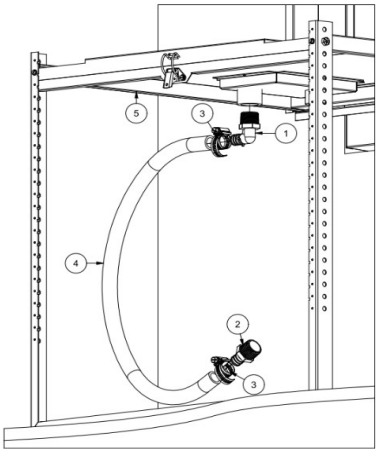
The space Constrained Products unit is equipped with a primary and secondary drain kit.

Primary Drain Kit

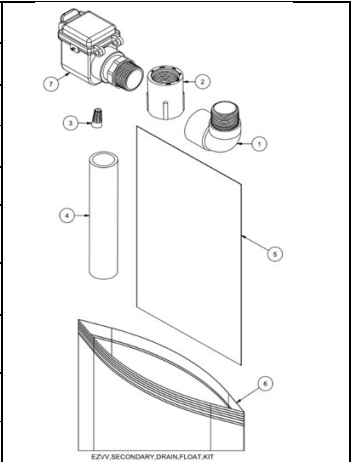
EZVV PRIMARY DRAIN KIT		
ITEM	DESCRIPTION	
1	ELBOW,3/4"MPT X 3/4" PEX, PLASTIC	
2	ADAPTER,3/4"MPT X 3/4" PEX, PLASTIC	
3	HOSE CLAMP, ADJ., SS,11/16"-1 1/4" DIA.	
4	HOSE 5/8 DRAIN,7/8, O.D.(CONDENSATE)	
5	INSTRUCTIONS, EZVP/EZVR, PRIMARY, DRAIN	
6	BAG, 9" X 12" X .002, CLEAR PLASTIC	
7	BOX,10"LX6.75"WX2.5"D	

Primary drain kit: should be connected to primary drain connection and to the building condenser line.

- 1. Locate the primary drain connection on Item 5, farthest from plenum wall.
- 2. Locate the internal drain connection (3/4" FPT required) and verify fit before kit installation.
- 3. Install elbow adapter (Item 1) into primary drain connection (Item 5) using Teflon tape and tighten until snug.
- 4. Loosen both clamps (Item 3) and slide down each end of the drain tube (item 4).
- 5. Install straight adapter (Item 2) into 3/4" FPT tape and tighten until snug.
- 6. Install each end of drain tube (Item 4) onto elbow and straight adapters (Items 1 & 3). ensure the drain tube (Item 4) is fully inserted over each fitting.
- 7. Align clamps (Item 3) over fittings (items 1&3) and tighten until snug.



Secondary Drain Kit

EZVV SECONDARY DRAIN KIT		
ITEM	DESCRIPTION	
1	ELBOW,3/4"MIPT X 3/4" SOC, PVC, SCH 40	
2	ADAPTER,3/4"FPT X 3/4" SOC, PVC, SCH 40	
3	WIRE NUT, SM (BLUE)	
4	PVC,3/4" X 120" LENGTH, SCH40	
5	INSTRUCTIONS, EZVP/EZVR, SECONDARY, DRAIN	
6	BAG, 9" X 12" X .002, CLEAR PLASTIC	
7	FLOAT SWITCH, ALL-ACCESS,3/4",24VAC	
8	BOX,10"LX6.75"WX2.5"D	

Secondary drain kit: connects to the secondary drain connection. Please note that this connection protrudes approximately 1/4" past the primary connection top side. The secondary drain kit can stop the compressor whenever the primary drain line gets clogged.

- 1

Locate the secondary drain connection on item 6, closest to plenum wall.

2

Install PVC elbow (Item 1) into primary drain connection (Item 6) using Teflon tape and tighten until snug, facing the socket to desired location.

3

Install PVC male adapter (Item 5) into PVC female adapter (Item 2) using Teflon tube and tighten until snug.

4

Install PVC length (Item 4) into PVC female adapter (Item 2) using PVC primer and glue.

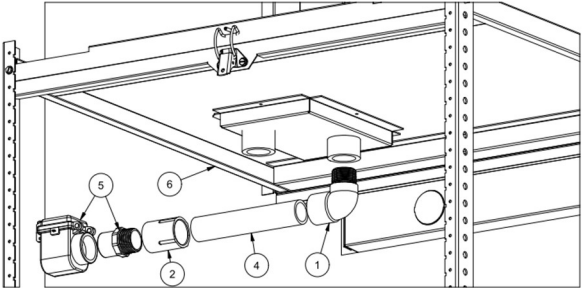
5

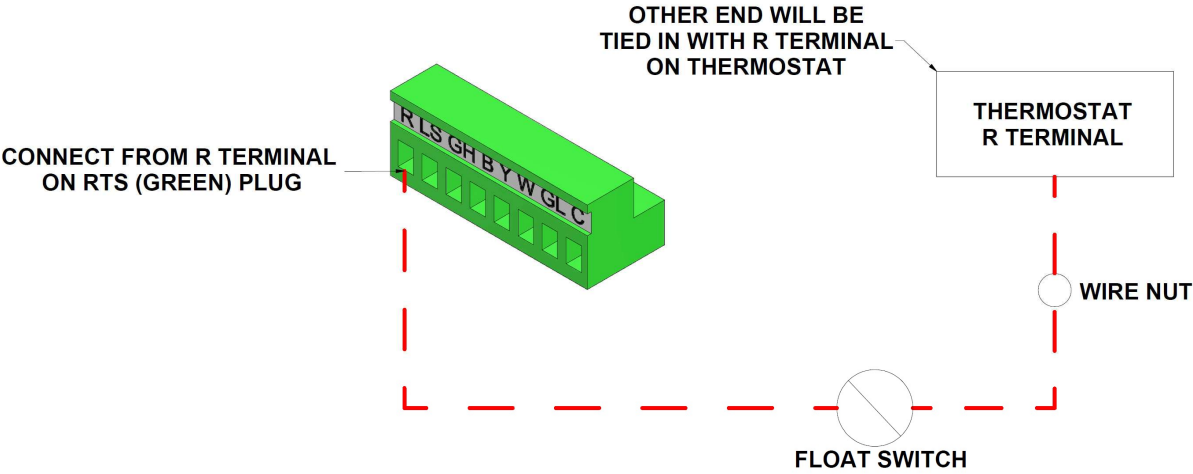
Install PVC male adapter (Item 5) into float switch body (Item 5) using PVC primer and glue.

6

Install PVC length (Item 4) into PVC elbow (Item 1) using PVC primer and glue, keeping float switch parallel and level to the floor.

7

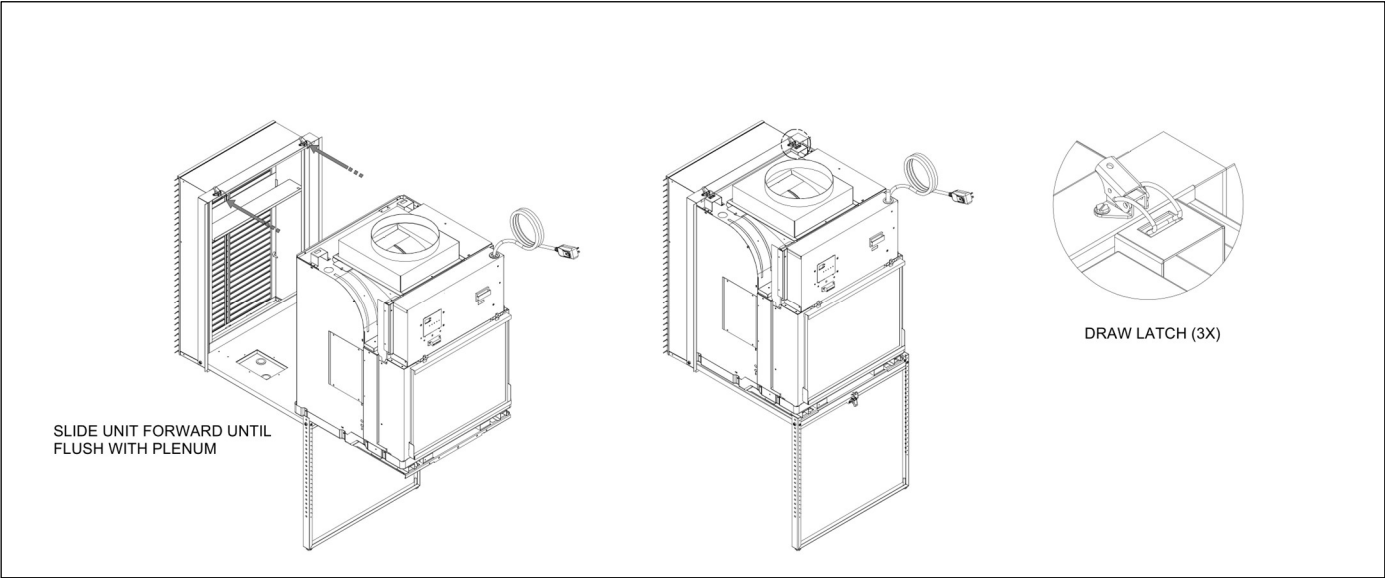
Make all necessary electrical connections for desired float switch operation using wire nut where needed (Item 3). (WIRING SHOWN BELOW)
- 



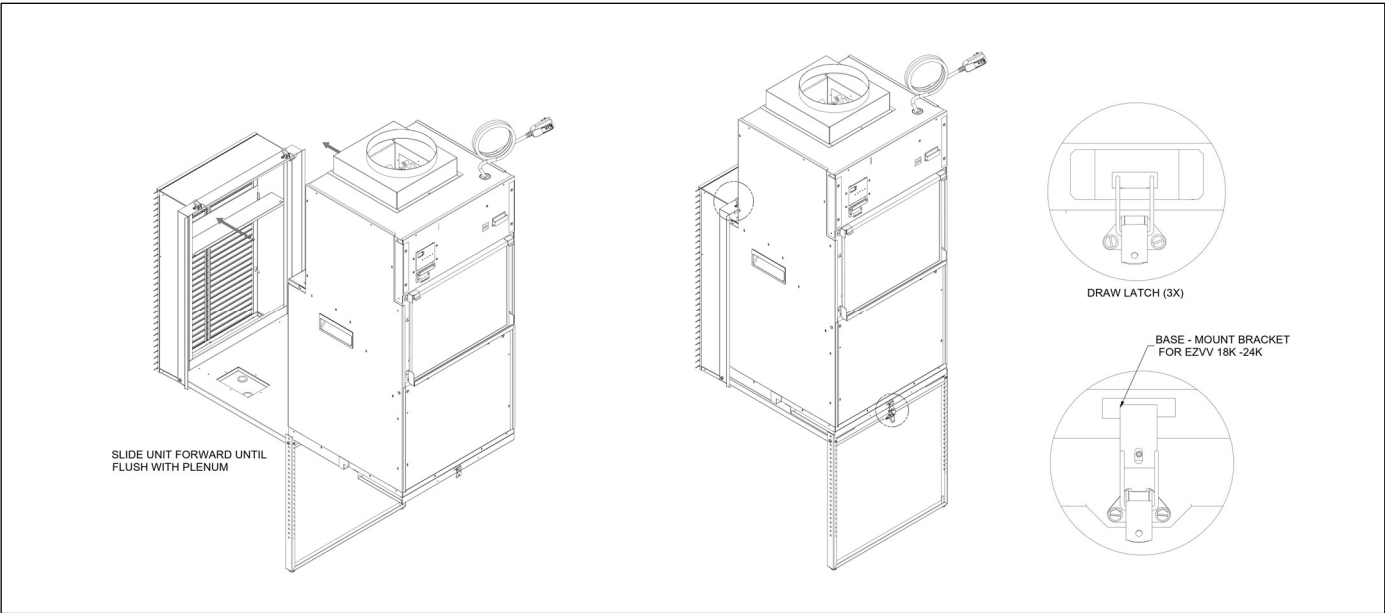
5. Mount Chassis on Base Pan/secure to Plenum

- 1. Place the chassis on the base pan.
- 2. Align the **Plenum Adapter** to the outdoor side of the chassis and secure it using the two **draw latches**.
- 3. Secure the chassis using the **Base-Mount Bracket** (included) (at location bottom-front, below the filter) for **18K and 24K BTU** models
 - **9K, 12K, and 15K BTU** models do not use this bracket; instead, they hook directly onto a mounting stud and secure with the same draw latch.

EZVV SERIES 9K, 12K, 15K BTU

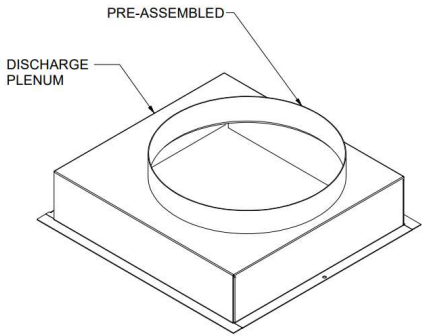


EZVV SERIES 18K, 24K BTU



6. Attach Air Discharge Plenum

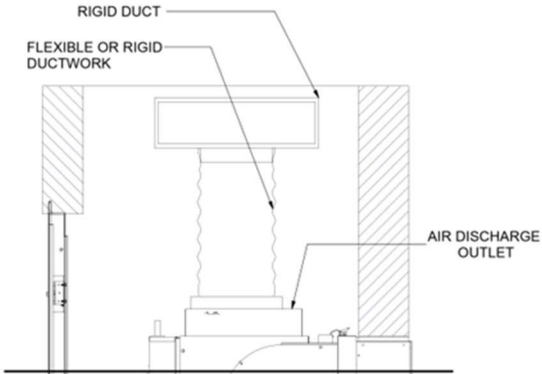
The Air Discharge Plenum is shipped separately and requires assembly and installation in the field. Before proceeding, prepare the closet duct work for later connection to the Air Discharge Plenum.



7. Connect the Top Duct

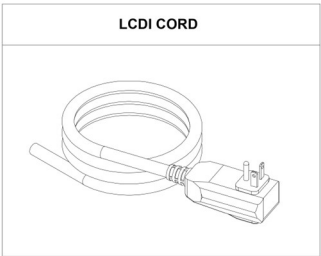
The collar on top of the Air Discharge Plenum accepts field-supplied, insulated, flexible or rigid 8” diameter transition duct for the 9K,12K and 15K BTU chassis, and 10” diameter transition duct for 18K and 24K BTU chassis. Flexible ducts may be used for transitions only; rigid ducts must be used for 90° bends and tees. DO NOT use flex duct for 90° bends or unsupported runs of 5 feet or more (flex duct can collapse and cause airflow restrictions). Pull all duct tight; extra duct slack can greatly increase static pressure.

Carefully attach flexible duct core and insulation/jacket to Air Discharge Plenum using two (2) 36” cable ties provided (one for flexible duct core and one for insulation/jacket).



8. Unit Power Connection

1. 230/208v units are equipped with an LCDI power cord that 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 LCDI power cord as part of the normal troubleshooting procedure. Make power connections to the unit (refer to WIRING DIAGRAMS section).
2. Once the unit is properly wired, measure the unit supply voltage. Voltage must fall within the voltage utilization range shown in the table below.



230/208V units with less than 5kW electric heating are equipped with an LCDI power cord that 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 LCDI power cord as part of the normal troubleshooting procedure. Make power connections to the unit, (refer to WIRING DIAGRAMS section).

Note: 230/208V units with more than 7.2kW electric heating use a HARDWIRE connection.

8. Hardwire Connection

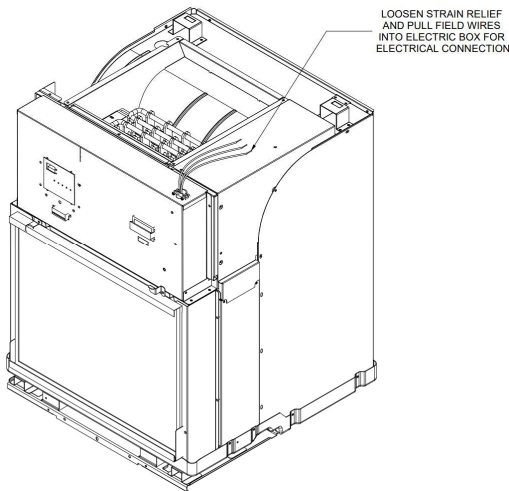
IMPORTANT: Please read following electrical safety data carefully

WARNING

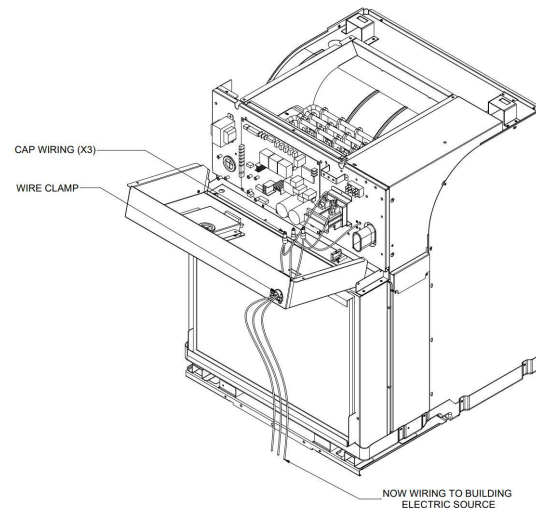
ELECTRICAL SHOCK AND/OR UNIT OPERATION AND DAMAGE HAZARD

Failure to follow this warning could result in personal injury or death and/or unit operation and damage.

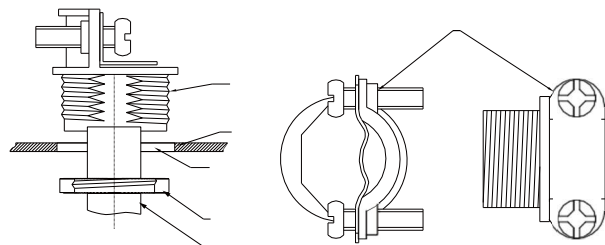
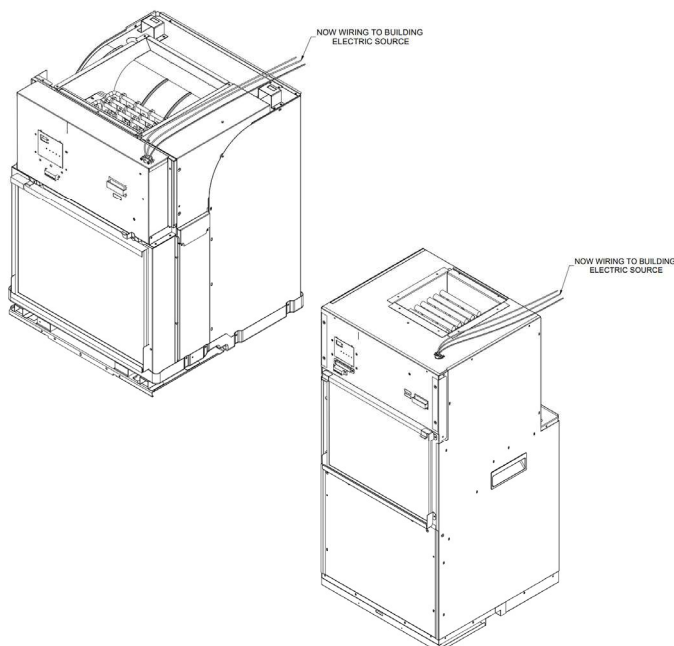
- Installation must be performed in accordance with the requirements of NEC and CEC by authorized personnel only.
- For personal safety, this unit **MUST BE** properly grounded.
- Protective devices (fuse or circuit breakers) acceptable for unit installations are specified on the nameplate of each unit.
- Aluminum building wiring may present special problems — consult a qualified electrician.
- When unit is in STOP position, there is still voltage to electrical controls.
- Disconnect power to unit before servicing by:
 1. Removing power cord (if it has one) from wall receptacle.
 2. Removing branch circuit fuses or turning circuit breakers off at panel.



Chassis, when ordered as hardwire, will come with strain relief and stripped wires as shown above.



Electrical connections can be made inside the box by loosening the strain relief and pulling in building wire. Connections can be wired together wiring nuts or similar, on the inside of the electric box, as shown.



WIRING CLAMP DETAIL

Tighten clamp onto wires using the 2 screws as shown above, and use locknut to fasten the strain relief in place

(Procedure is the same for all BTU units)

10. Voltage Measurements

OPERATING VOLTAGE		
UNIT VOLTAGE RATING	VOLTAGE UTILIZATION RANGE	
	MINIMUM	MAXIMUM
230/208	197	253
277	238	292

11. Electrical Circuit Ratings

Line Voltage	Rated Amperage	Receptacle Configuration	Receptacle Number	Maximum Amperage
208/230	15		NEMA 6-15R	12
208/230	20		NEMA 6-20R	16
208/230	30		NEMA 6-30R	24
277	20		NEMA 7-20R	16
277	20		NEMA 7-30R	24

NOTE: USE HACR CIRCUIT BREAKER OR TIME DELAY FUSE.

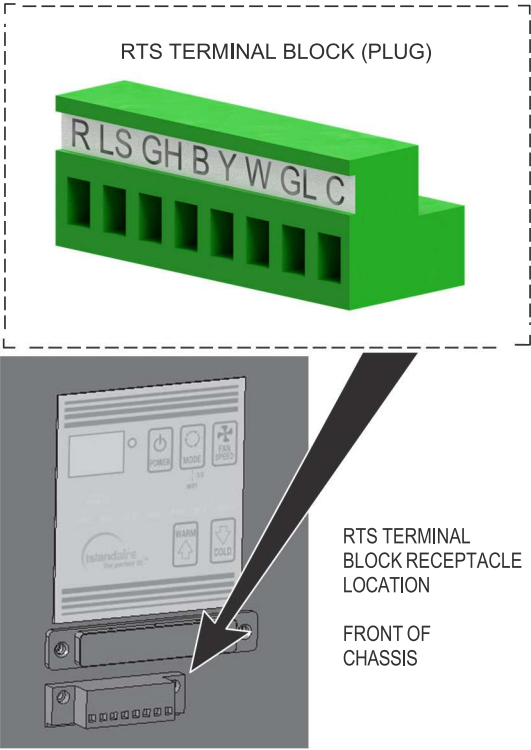
12. Remote Wall-Mounted Thermostat

The Space Constrained Products unit can be controlled by any remote electronic thermostat that can interface with RCBWYG terminals. In terms of outputs, there are two types of thermostats: mechanical and solid-state. Refer to the manual provided with the thermostat for proper connections and settings.

A Remote Thermostat Terminal Block with removeable plug is located on the front of the chassis below the touchpad Control Panel. It provides a connection for a remote thermostat and energy management inputs (any type 24 Vac thermostat can be used).

NOTE: Ensure power to the unit is shut off prior to making any electrical connections.

- 1- Remove the Remote Thermostat Terminal Block plug from the terminal block receptacle and connect the thermostat wires to the plug as shown below.
- 2- Re-insert plug into terminal block receptacle.



Terminal R

Low voltage terminal to supply voltage to an external wall mounted thermostat. This terminal can supply 100 mA at 18 - 30 Vac RMS over the entire input voltage range specified.

Terminal LS

When this low voltage terminal is connected to the R terminal, all power is disabled to provide an energy management system interface.

Terminal GH

When this low-voltage terminal is connected to the R terminal by the thermostat, and the unit is in remote mode, the blower/ fan will be requested for operation on high speed.

Terminal B

When this low-voltage terminal is connected to the R terminal by the thermostat, the reversing valve is energized. Electric heat mode shall be attempted automatically if conditions require.

Terminal Y

When this low-voltage terminal is connected to the R terminal by the thermostat, the compressor will be switched on (the GL or GH terminal will also be connected to the R terminal by the thermostat).

Terminal W

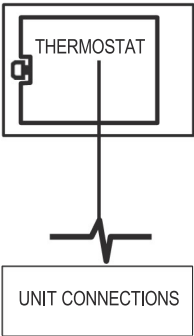
When this low-voltage terminal is connected to the R terminal by the thermostat, electric heat is switched on. Do not use W1 (White) in heat pump applications.

Terminal GL

When this low voltage-terminal is connected to the R terminal by the thermostat, the blower/fan will be requested for operation on low speed.

Terminal C

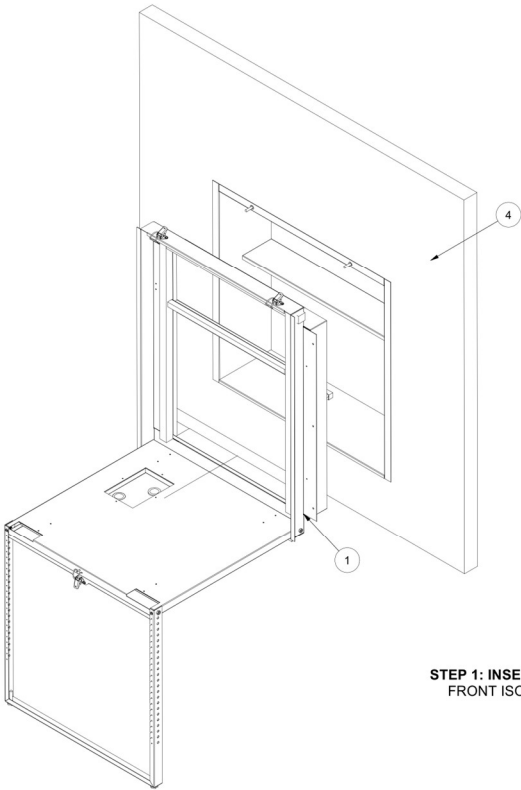
Low-voltage terminal, 24 Vac common, to provide opposite polarity voltage to the wall-mounted thermostat or RCN.



6

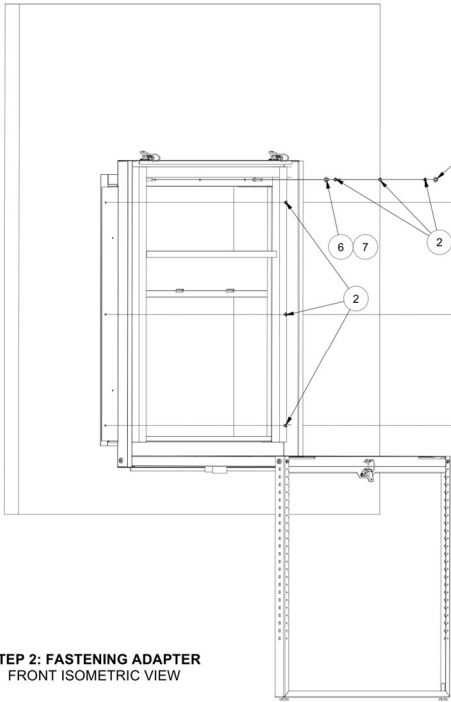
ADAPTER KITS

OPTIONAL: INSTRUCTIONS ISLANDAIRE TO ADIRONDACK-AIRE ADAPTER (SOLD SEPERATELY)



STEP 1: INSERTING ADAPTER
FRONT ISOMETRIC VIEW

PARTS LIST		
ITEM	QTY	DESCRIPTION
1	1	KIT,VR/V.P, 2" DEEP EXT. ADAPTER/BASE,ADIRONDACK-AIRE
2	9	SCREW, #8X1/2, SELF DRILL, HEX, ZN
3	1	ADIRONDACK AIRE BAFFLE
4	1	ADIRONDACK AIRE PLENUM
5	1	UNIT
6	2	FIELD SUPPLIED
7	2	FIELD SUPPLIED
8	1	EXISTING

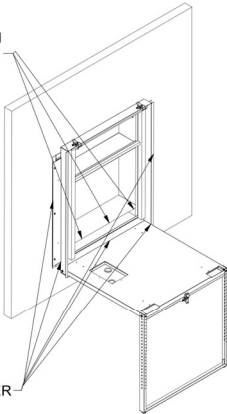


STEP 2: FASTENING ADAPTER
FRONT ISOMETRIC VIEW

APPLY SILICONE CAULK AT SEEM
ON BOTTOM WHERE ADAPTER
SITS ON THE EXISTING PLENUM

SCREWS (ITEM 2)
USED TO FASTEN ADAPTER
INTO WALL PLENUM
ARE INCLUDED WITH
KIT 4092519

APPLY SILICONE CAULK
TO ANY GAPS BETWEEN ADAPTER
AND EXISTING PLENUM/WALL



PARTS LIST		
ITEM	QTY	DESCRIPTION
1	1	KIT,VR/V.P, 2" DEEP EXT. ADAPTER/BASE,ADIRONDACK-AIRE
2	9	SCREW, #8X1/2, SELF DRILL, HEX, ZN
3	1	ADIRONDACK AIRE BAFFLE
4	1	ADIRONDACK AIRE PLENUM
5	1	UNIT
6	2	FIELD SUPPLIED
7	2	FIELD SUPPLIED
8	1	EXISTING

OPTIONAL: INSTRUCTIONS ISLANDAIRE TO FRIEDRICH ADAPTER (SOLD SEPERATELY)

EXISTING FRIEDRICH WALL PLENUM

1

2

2

2

STEP ONE: FASTEN PLENUM (4091649) TO ADAPTER PLENUM (2401062) USING 6X SCREWS (6060024)

DETAIL B
HOLES ON ADAPTER SIDE FLANGES CAN BE USED TO SECURE ISLANDAIRE ADAPTER TO EXISTING FRIEDRICH WALL SLEEVE (STEP 2)

EXISTING FRIEDRICH WALL PLENUM

3

3

STEP TWO: FASTEN THIS COMBINATION TO EXISTING FRIEDRICH WALL SLEEVE USING 8X SCREWS (6060024) (ONE IS BELOW BASE PAN-NOT SHOWN)

FINAL ASSEMBLY

EXISTING FRIEDRICH WALL PLENUM

PARTS LIST				
ITEM	QTY	PART NUMBER	DESCRIPTION	
1	1	2401062	WALL PLENUM, VP/VR, ASSY FRIEDRICH ADAPTER	
2	1	4091649	KIT, VR/VP, 2" DEEP EXT. ADAPTER/BASE	
3	14	6060024	SCREW, 8 X 3/8 HEX SLOTTED	

OPTIONAL: INSTRUCTIONS ISLANDAIRE TO FIRST COMPANY ADAPTER (SOLD SEPERATELY)

2

STEP ONE: SLIDE PLENUM INTO PLACE FOAM SHOULD MEET UP WITH EXTERIOR LOUVER AND BAFFLE IN CENTER

1

3

3

B

STEP TWO: ATTACH BOTTOM BRACKET AFTER PLENUM IS IN PLACE AS IT WON'T SLIDE IN WITHOUT IT BEING OFF (DRAIN) SLOTS IN BRACKET ALLOW FOR ADJUSTMENT.

BOTTOM BRACKET

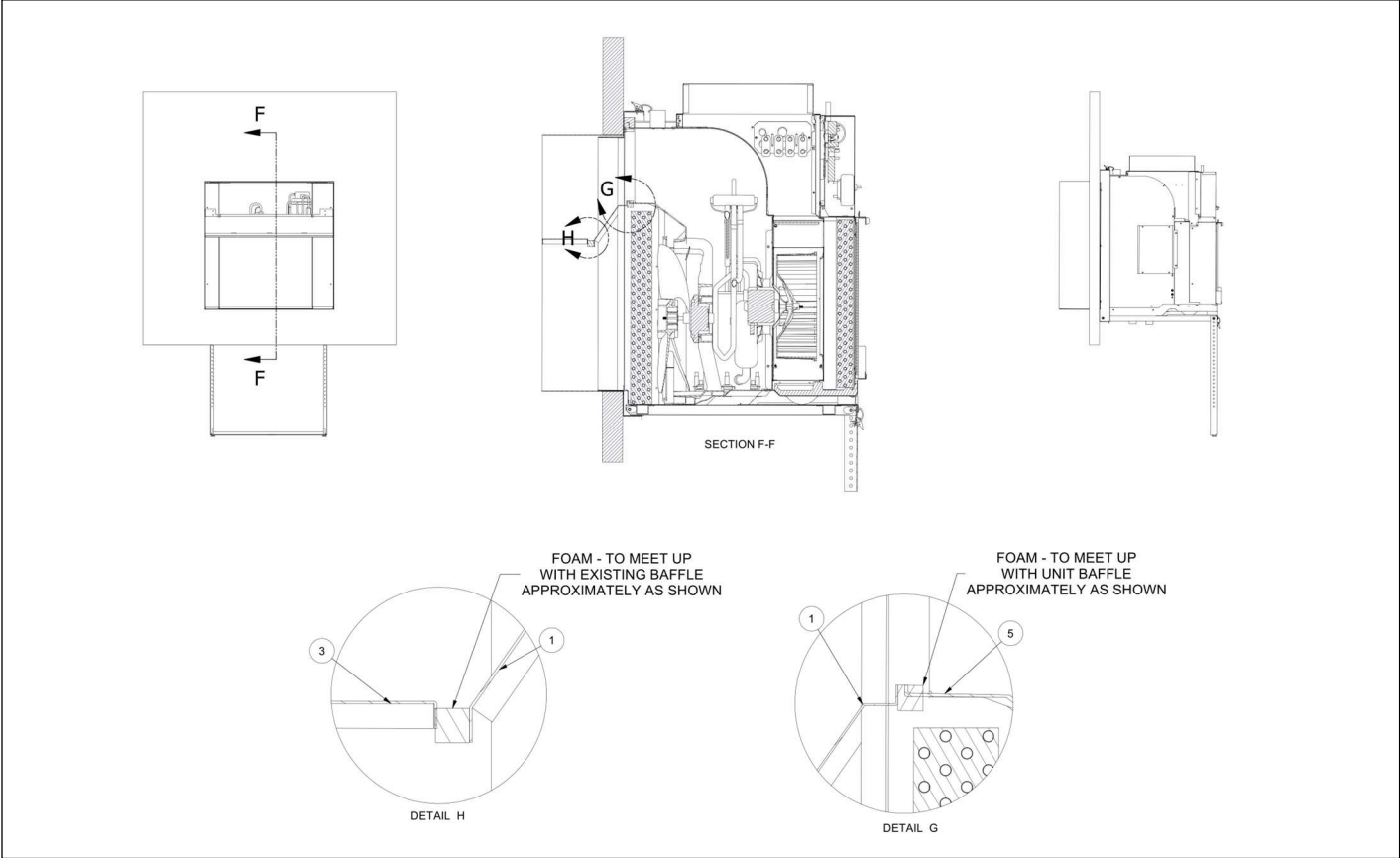
3

STEP THREE: FASTEN ISLANDAIRE PLENUM TO FIRST COMPANY PLENUM
STEP FOUR: USE CAULK TO SEAL AIR GAPS

DETAIL B
ITEM 3

PARTS LIST		
ITEM	QTY	DESCRIPTION
1	1	FIRST COMPANY PLENUM
2	1	ISLANDAIRE ADAPTER
3	10	SCREW, #8X1/2, SELF DRILL, HEX, ZN

INSTRUCTIONS (ALL PLENUM ADAPTERS)

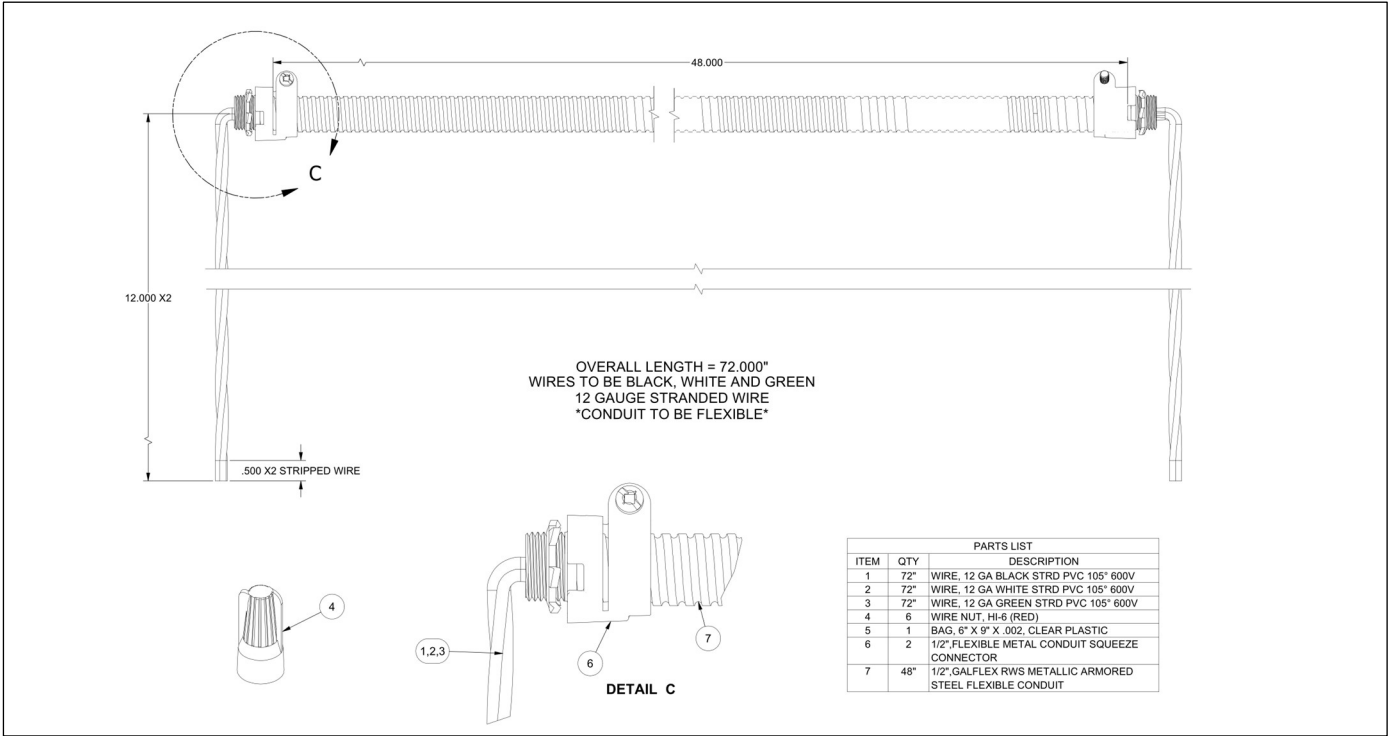
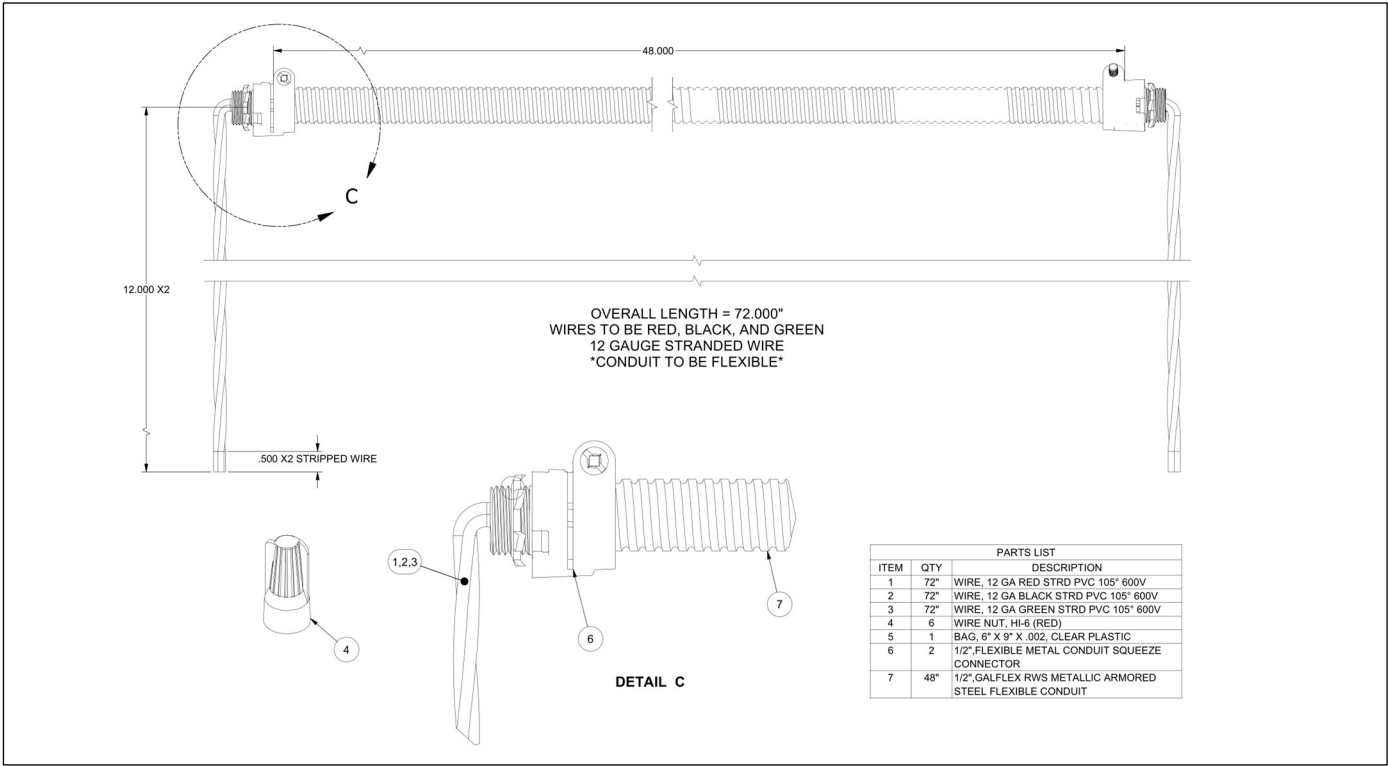


Plenums must meet up with existing baffles, as shown above, to avoid recirculation issues.

7

OPTIONAL: HARDWARE KIT (P/N 4092539 & 4092552)
(SOLD SEPERATELY)

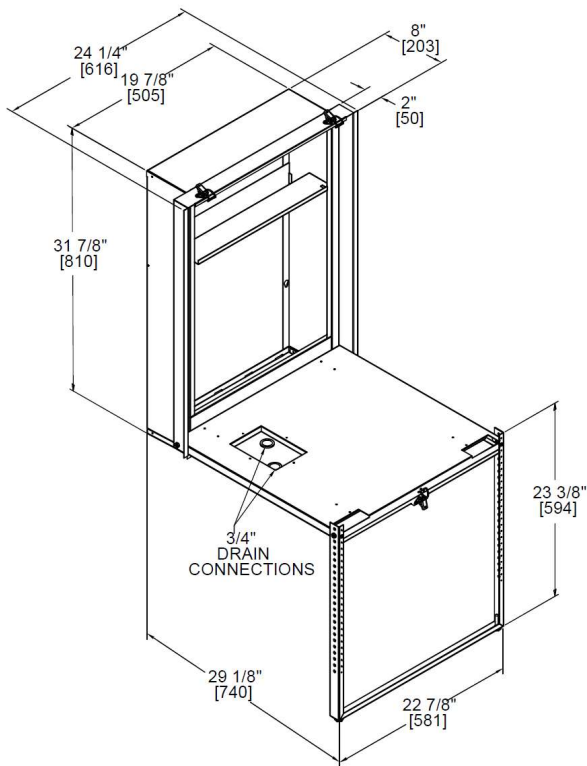
The Hardwire kit is designed for use in applications where an LCDI power cord is not used.



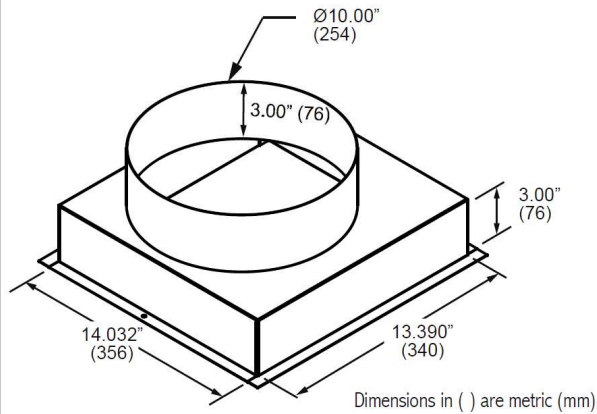
8

ACCESSORIES (SOLD SEPERATELY)

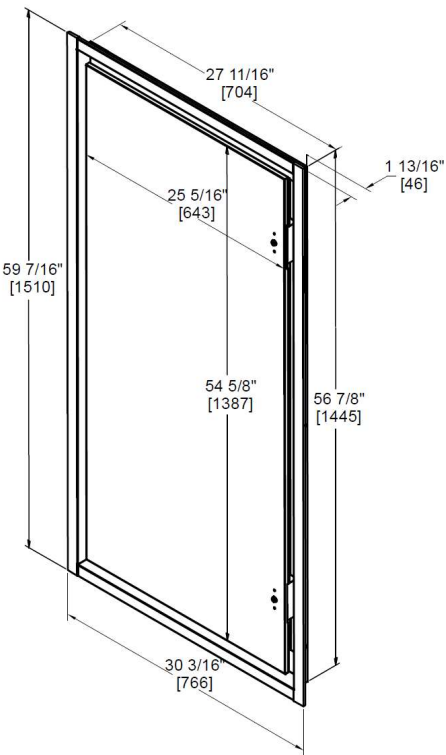
Wall Plenum Assembly Dimensions (All Units):



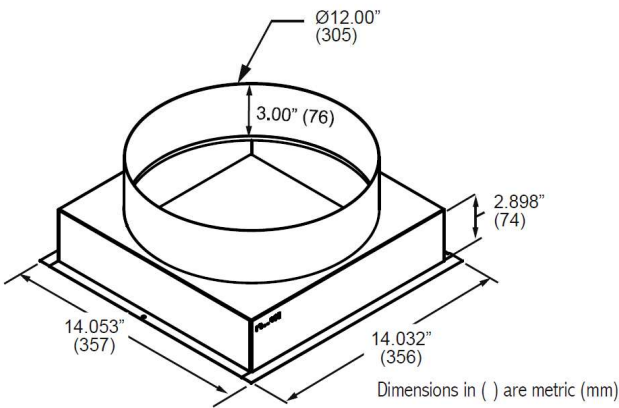
9k thru 15k Unit Discharge Plenum Dimensions:



Hinged Access Panel Assembly Dimensions (All Units):

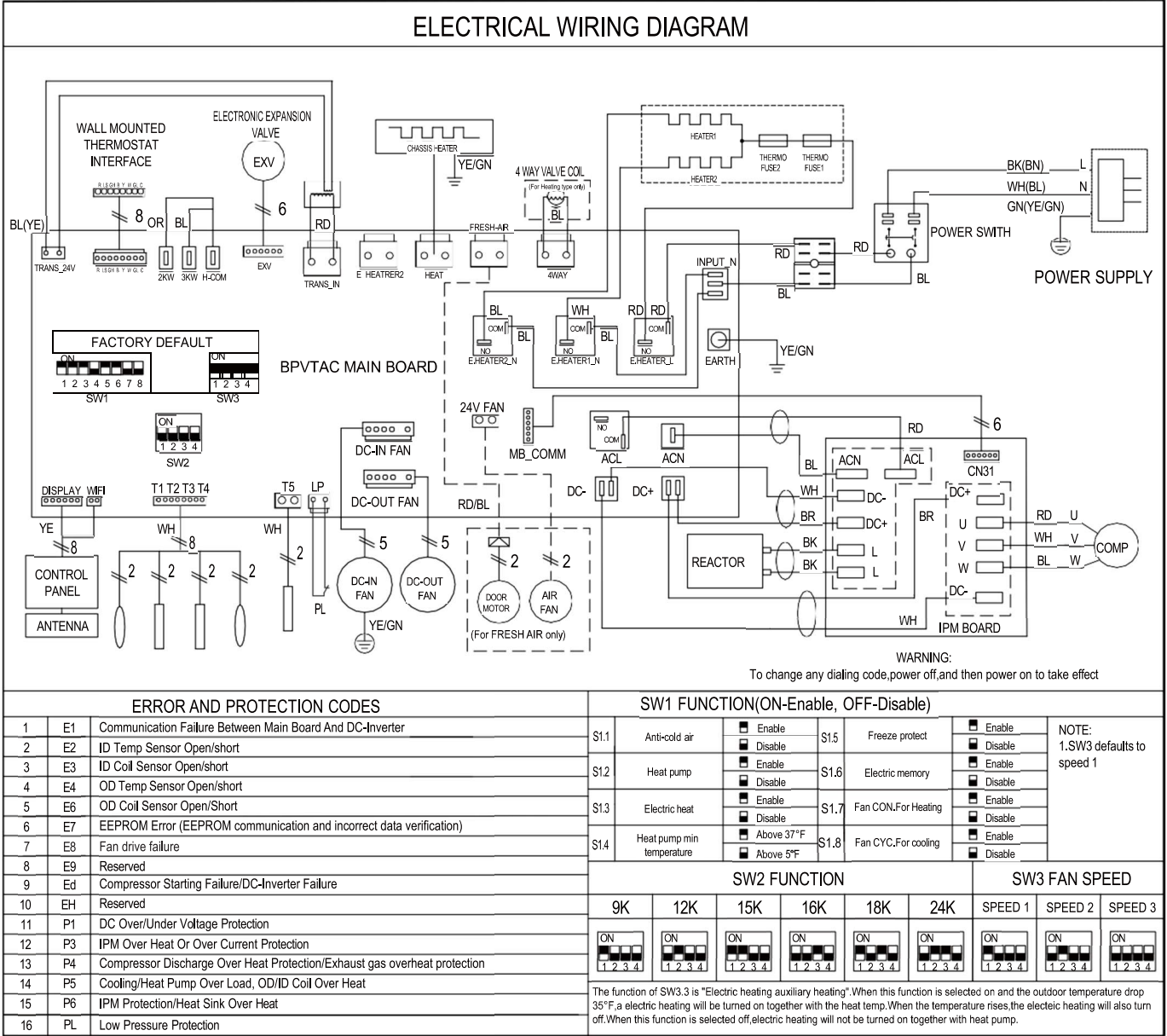


18k and 24k Unit Discharge Plenum Dimensions:



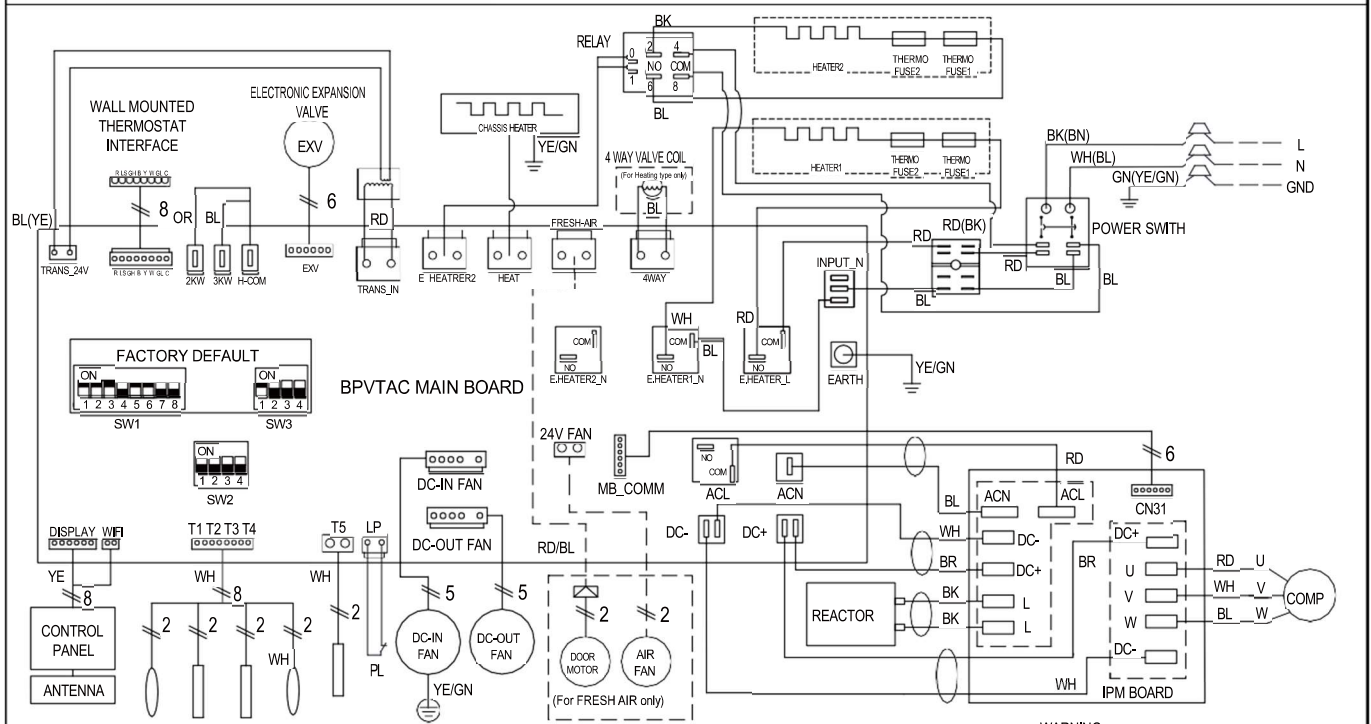
9

DIAGRAMS AND BOM



NOTE: Applicable for less than 5kW electric heating. For reference only, the actual wiring diagram shall prevail.

ELECTRICAL WIRING DIAGRAM



WARNING:
To change any dialing code,power off,and then power on to take effect

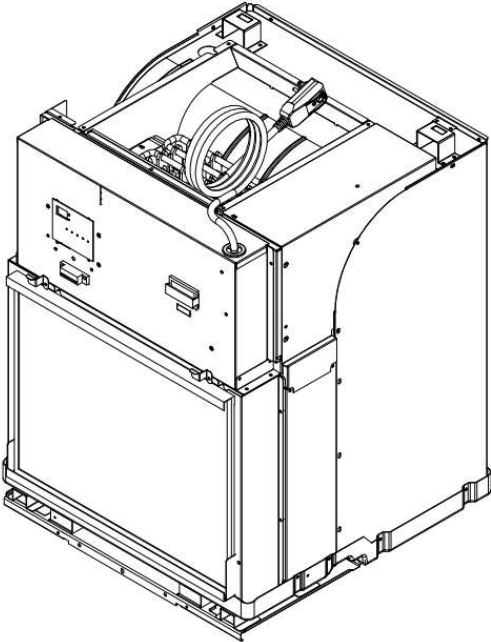
ERROR AND PROTECTION CODES				SW1 FUNCTION(ON-Enable, OFF-Disable)									
1	E1	Communication Failure Between Main Board And DC-Inverter		S1.1	Anti-cold air	☐ Enable ☐ Disable	S1.5	Freeze protect	☐ Enable ☐ Disable	NOTE: 1.SW3 defaults to speed 1			
2	E2	ID Temp Sensor Open/short		S1.2	Heat pump	☐ Enable ☐ Disable	S1.6	Electric memory	☐ Enable ☐ Disable				
3	E3	ID Coil Sensor Open/short		S1.3	Electric heat	☐ Enable ☐ Disable	S1.7	Fan CON,For Heating	☐ Enable ☐ Disable				
4	E4	OD Temp Sensor Open/short		S1.4	Heat pump min temperature	☐ Above 37°F ☐ Above 5°F	S1.8	Fan CYC,For cooling	☐ Enable ☐ Disable				
5	E6	OD Coil Sensor Open/Short											
6	E7	EEPROM Error(EEPROM communication and incorrect data verification)		SW2 FUNCTION						SW3 FAN SPEED			
7	E8	Fan drive failure											
8	E9	Reserved											
9	Ed	Compressor Starting Failure/DC-Inverter Failure											
10	EH	Reserved											
11	P1	DC Over/Under Voltage Protection		9K	12K	15K	16K	18K	24K	SPEED 1	SPEED 2	SPEED 3	
12	P3	IPM Over Heat Or Over Current Protection		ON 1 2 3 4	ON 1 2 3 4	ON 1 2 3 4	ON 1 2 3 4	ON 1 2 3 4	ON 1 2 3 4	ON 1 2 3 4	ON 1 2 3 4	ON 1 2 3 4	
13	P4	Compressor Discharge Over Heat Protection/Exhaust gas overheat protection											
14	P5	Cooling/Heat Pump Over Load, OD/ID Coil Over Heat		The function of SW3.3 is "Electric heating auxiliary heating".When this function is selected on and the outdoor temperature drop 35°F,a electric heating will be turned on together with the heat temp.When the temperature rises,the electric heating will also turn off.When this function is selected off,electric heating will not be turned on together with heat pump.									
15	P6	IPM Protection/Heat Sink Over Heat											
16	PL	Low Pressure Protection											

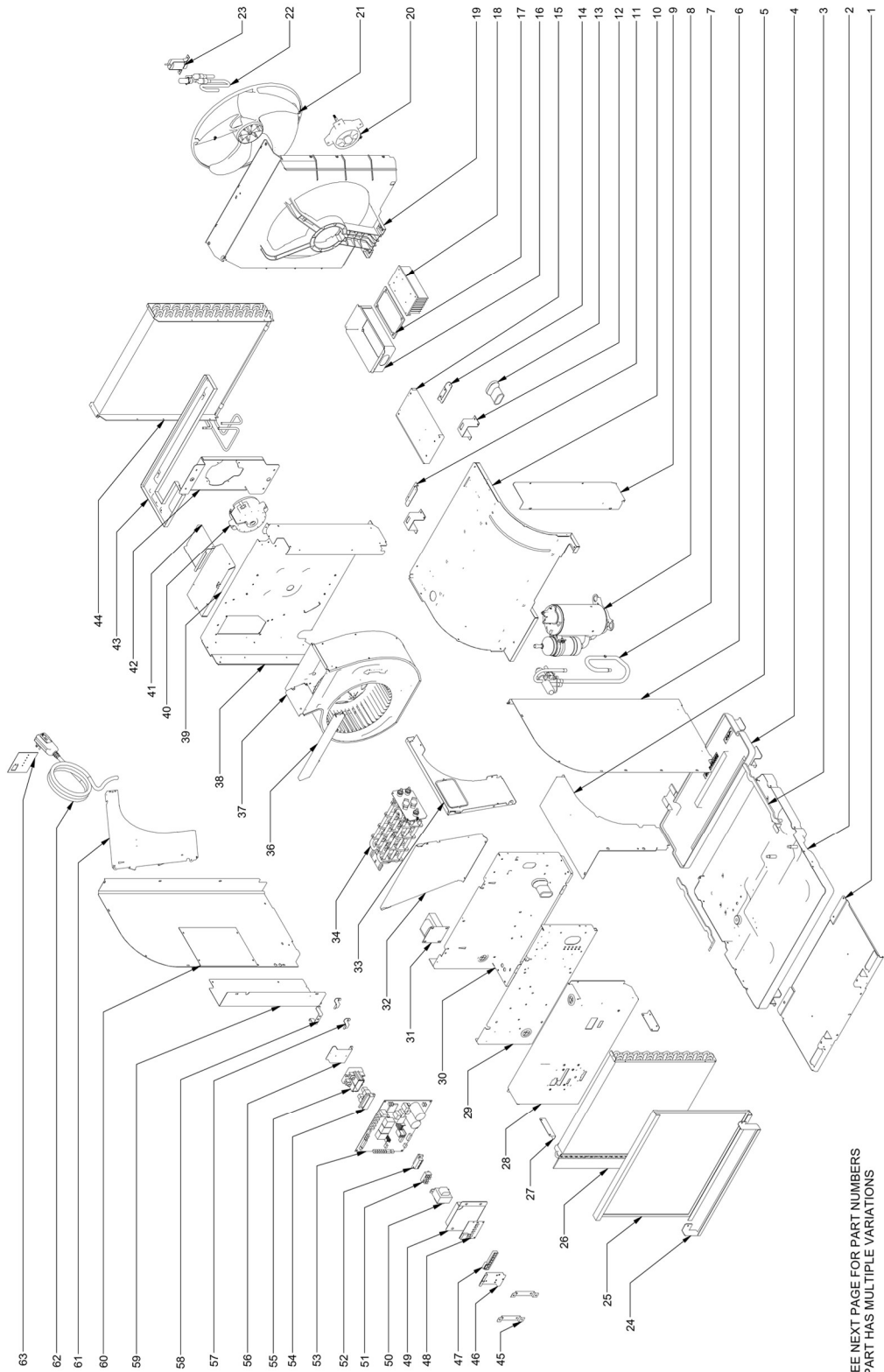
NOTE: Applicable for more than 7.2kW electric heating. For reference only, the actual wiring diagram shall prevail.

PARTS LIST – EZVV SERIES 9K, 12K, and 15K BTU

PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	TBD	EZVV,FIREWALL,BASE,PLATE,BOTTOM
2	1	TBD	EZVV,FIREWALL,BASE
3	1	TBD	EZVV,EVAP.COIL,DRAIN PAN
4	1	TBD	EZVV,FIREWALL,BASE,2
5	1	TBD	EZVV,SIDE PANEL,RIGHT,FRONT
6	1	TBD	EZVV,SIDE PANEL,RIGHT,BACK
7	1	6041415	REVERSING VALVE,115V,R22/R410A/R32,SMALL
8.A	1	TBD	9K,COMPRESSOR
8.B	1	TBD	12K,COMPRESSOR
8.C	1	TBD	15K,COMPRESSOR
9	1	TBD	EZVV,EVAP.COIL,RIGHT SUPPORT
10	1	TBD	EZVV,FIREWALL
11	1	TBD	EZVV,COND.COIL,SAMRT BOX HOLDER,BRAKET,FRONT
12	2	TBD	EZVV,COND.FIREWALL,BRACKET,ON TOP
13	1	TBD	EZVV,SMART BOX,CABLE GROMMER
14	1	TBD	EZVV,COND.COIL,SMART BOX HOLDER,BRAKET,BACK
15	1	TBD	EZVV,COND.COIL,SMART BOX COVER
16	1	TBD	EZVV,COND.COIL,SMART BOX
17	1	TBD	EZVV,GASKET
18	1	TBD	EZVV,ALUMINUM HEAT SINK
19	1	TBD	EZVV,6AA,SHROUD
20	1	TBD	EZVV,6AA,COND.MOTOR,115V
21	1	TBD	EZVV,6AA,COND.FAN,BLADE
22	1	TBD	PIPING
23	1	6040999	DUMP VALVE, EZ42 PTHP
24	1	TBD	EZVV,FILTER,SUPPORT,BOTTOM
25	1	TBD	EZVV,FILTER
26	1	TBD	EZVV,EVAP.COIL
27	1	TBD	EZVV,ELEC.BOX,L FIXTURE
28	1	TBD	EZVV,ELEC.BOX,FRONT PLATE
29	1	TBD	EZVV,ELEC.BOX,INSIDE PLATE
30	1	TBD	EZVV,ELEC.BOXCOVER
31	1	6041359	TRANSFORMER,DIG7,TRI VOLTAGE,24V/11V
32	1	TBD	EZVV,OUTLET FUNEL,FRONT,PLATE
33	1	TBD	EZVV,OUTLET FUNEL,SIDE PLATE,RIGHT
34	1	TBD	EZVV,INSIDE OUTLET,HEAT EXCHENGER
35	1	TBD	EZVV,OUTLET,MESH
36	1	TBD	EZVV,FUNEL,SUPPORT,BACK
37	1	TBD	BLOWER
38	1	TBD	EZVV,FIREALL,MOTOR HOLDER
39	1	TBD	EZVV,BLOWER,PLATE,TOP ,LEFT
40	1	TBD	EZVV,BLOWER,MOTOR
41	1	TBD	EZVV,BLOWER,PLATE,TOP ,RIGHT
42	1	TBD	EZVV,BLOWER,MOTOR,MOUNT PLATE
43	1	TBD	EZVV,COND.COIL,DRAIN PAN
44	1	TBD	EZVV,COND.COIL
45	1	TBD	EZVV,ELEC.BOX,BRAKET
46	1	TBD	EXVV,ELEC.BOX,PLATE
47	1	TBD	DISPLAY BOARD,GASKET

PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
48	1	6040878	DIGITAL DISPLAY BOARD, DIG7.1, R-410A
49	1	TBD	DIGITAL DISPLAY, MOUNT PLATE
50	1	6041359	TRANSFORMER,DIG7,TRI VOLTAGE,24V/11V
51	1	TBD	TERMINAL BLOCK
52	1	4092493	KIT,RTS,GREEN,8 WIRE,DIG7
53	1	TBD	EZVV,MOTOR DRIVER
54	1	TBD	HIGH VOLTAGE SWITCH,HOLDER,PLATE
55	1	TBD	RELAY BLOCK
56	1	TBD	RELAY,SUPPORT PLATE
57	1	TBD	EZVV,UPPER FILTER BRAKET,LEFT
58	1	TBD	EZVV,UPPER FILTER BRAKET,RIGHT
59	1	TBD	EZVV,EVAP.COIL,RIGHT SUPPORT
60	1	TBD	EZVV,SIDE PANEL,LEFT
61	1	TBD	EZVV,OUTLET FUNEL,SIDE PLATE,LEFT
62.A	1	6160405	LINE,CORD,208/230V,15 AMP,78",LCDI
62.B	1	6160406	LINE,CORD,208/230V,20 AMP,78",LCDI
62.C	1	6160676	LINE,CORD,277V,30 AMP,6FT.,NON LCDI
63	1	6041403	MEMBRANE,DIG7,R32,3.38"W X 3.78"H EZGS/EZPD/EZVV



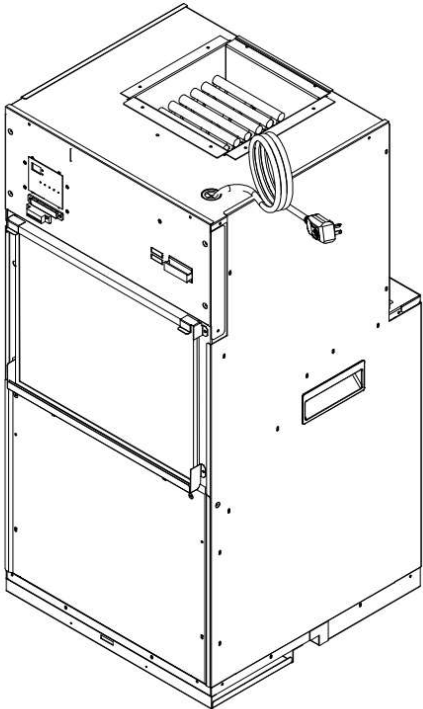


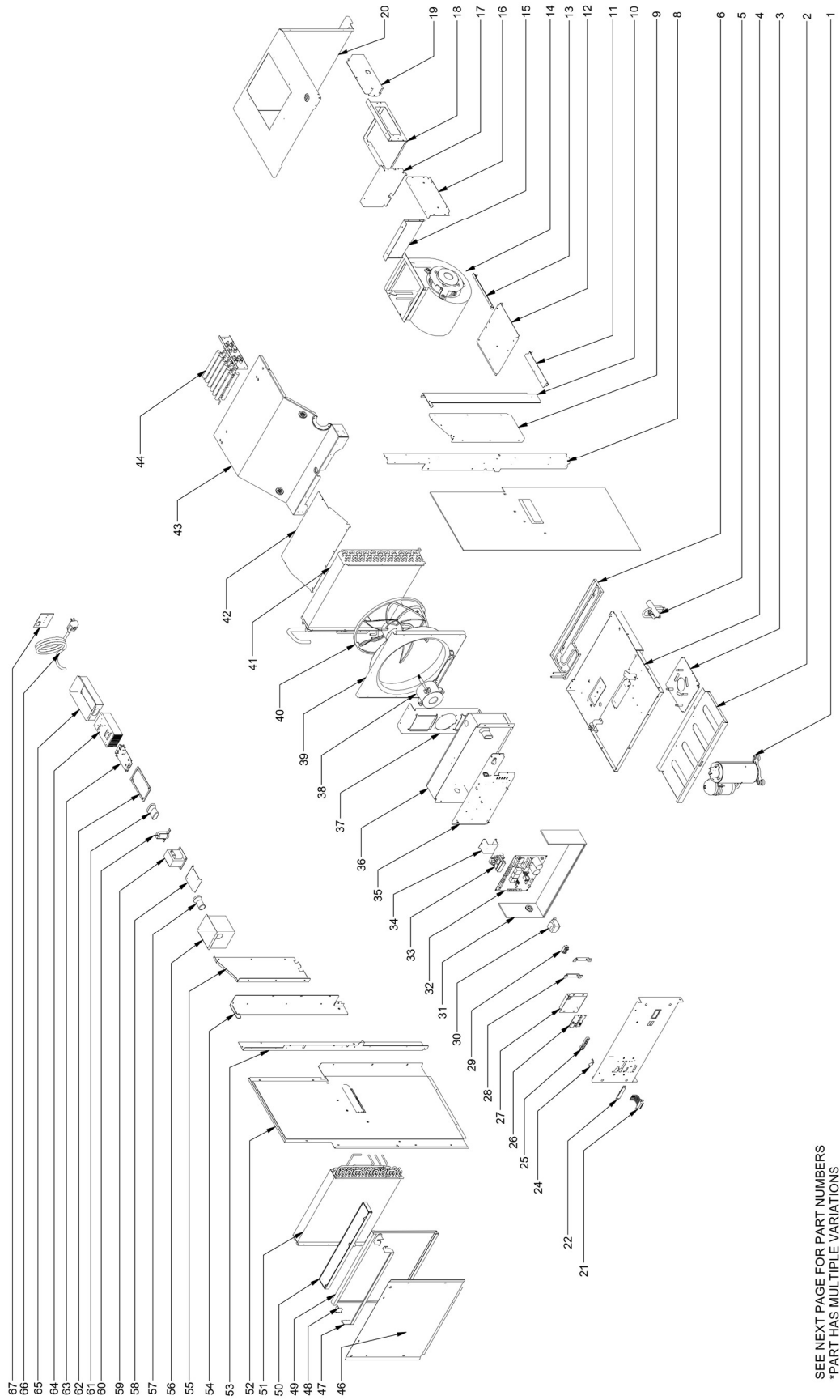
SEE NEXT PAGE FOR PART NUMBERS
*PART HAS MULTIPLE VARIATIONS

PARTS LIST – EZVV SERIES 18K and 24K BTU

PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1.A	1	TBD	18K,COMPRESSOR
1.B	1	TBD	24K,COMPRESSOR
2	1	TBD	EZVV,FIREWALL,BOTTOM,UNDER PLATE
3	1	TBD	EZVV,COMP.,PLATE,SUPPORT
4	1	TBD	EZVV,FIREWALL,BOTTOM
5	1	6041415	REVERSING VALVE,115V,R22/R410A/R32,SMALL
6	1	TBD	EZVV,COND.COIL,DRAIN PAN
7	1	TBD	EZVV,SIDE PANEL,RIGHT
8	1	TBD	EZVV,VERTICAL STUD,RIGHT-FRONT
9	1	TBD	EZVV,FAN COIL,SIDE PANEL,RIGHT
10	1	TBD	EZVV,VERTICAL STUD,RIGHT-BACK
11	1	TBD	EZVV,SMART BOX,HOLDER PLATE,LEFT SUPPORT
12	1	TBD	EZVV,SMART BOX,HOLDER PLATE
13	1	TBD	EZVV,SMART BOX,HOLDER PLATE,RIGHT SUPPORT
14	1	TBD	EZVV,BLOWER
15	1	TBD	EZVV,BLOWER,OUTLET,PANEL,FRONT
16	1	TBD	EZVV,BLOWER,OUTLET,PANEL,LEFT
17	1	TBD	EZVV,BLOWER,OUTLET,PANEL,BACK
18	1	TBD	EZVV,BLOWER,OUTLET,FRAME,RIGHT
19	1	TBD	EZVV,BLOWER,OUTLET,SIDE BOX,RIGHT
20	1	TBD	EZVV,BLOWER,OUTLET,FIREWALL
21	1	4092493	KIT,RTS,GREEN,8 WIRE,DIG7
22	1	6041430	WIFI,ANTENNA,EZPD,EZVV,EZED,EZGS
23	1	TBD	EZVV,ELEC.BOX,FRONT PLATE
24	1	TBD	BRACKET
25	1	TBD	EZVV,ELEC.BOX,DIG.BOARD,CLEARANCE KEEPER
26	1	6040878	DIGITAL DISPLAY BOARD, DIG7.1, R-410A
27	1	TBD	EZVV,ELEC.BOX,DIG.BOARD,COVER PLATE
28	1	TBD	EZVV,ELEC.BOX,BRAKET,MOTOR DRIVER,HOLDER
29	1	TBD	TERMINAL BLOCK
30	1	6041359	TRANSFORMER,DIG7,TRI VOLTAGE,24V/11V
31	1	TBD	EZVV,ELEC.BOX,INSIDE PLATE
32	1	TBD	EZVV,ELEC.BOX,MOTOR DRIVER
33	1	TBD	EZVV,ELEC.BOX,HIGH VOLTAGE SWITCH
34	1	TBD	EZVV,ELEC.BOX,HIGH VOLTAGE SWITCH,SUPPORT PLATE
35	1	TBD	EZVV,ELEC.BOX,INSIDE PANEL
36	1	TBD	EZVV,ELEC.BOX,COVER PLATE
37	1	TBD	EZVV,FAN COIL,MOTOR MOUNT
38	1	TBD	EZVV,FAN COIL,MOTOR
39	1	TBD	EZVV,FAN COIL,SHROUD
40	1	TBD	EZVV,FAN COIL,BLADES
41	1	TBD	EZVV,FAN COIL,COND.COIL
42	1	TBD	EZVV,FANC.COIL, TOP COVER
43	1	TBD	EZVV,FIREWALL,FAN COIL
44	1	TBD	EZVV,HEAT EXCHANGER
45	1	TBD	EZVV,OUTLET,MESH
46	1	TBD	EZVV,FRONT PANEL
47	1	TBD	EZVV,FILTE BRAKET,BOTTOM
48	1	TBD	EZVV,FILTER BRAKET, TOP
49	1	TBD	EZVV,FILTER
50	1	TBD	EZVV,EVAP.COIL,DRAIN PAN
51	1	TBD	EZVV,EVAP.COIL
52	1	TBD	EZVV,SIDE PANEL,LEFT
53	1	TBD	EZVV,VERTICAL STUD,LEFT-FRONT
54	1	TBD	EZVV,VERTICAL STUD,LEFT-BACK

PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
55	1	TBD	EZVV,FAN COIL,SIDE PANEL,LEFT
56	1	TBD	EZVV,TRANS.BOX
57	1	TBD	EZVV,TRANS.BOX,GROMMER
58	1	TBD	EZVV,TRANS.BOX,TRANS.,PLATE SUPPORT
59	1	6041359	TRANSFORMER,DIG7,TRI VOLTAGE,24V/11V
60	1	6040999	DUMP VALVE, EZ42 PTHP
61	1	TBD	EZVV,SMART BOX,GROMMER
62	1	TBD	EZVV,SMART BOX,GASKET
63	1	TBD	EZVV,SMART BOZ,BOARD
64	1	TBD	EZVV,SMART BOX,ALUMINUM HEAT SINK
65	1	TBD	EZVV,SMART BOX
66.A	1	6160405	LINE.CORD,208/230V,15 AMP,78",LCDI
66.B	1	6160406	LINE.CORD,208/230V,20 AMP,78",LCDI
66.C	1	6160676	LINE.CORD,277V,30 AMP,6FT.,NON LCDI
67	1	6140485	MEMBRANE,DIG7,R32,3.38"W X 3.78"H EZGS/EZPD/EZVV





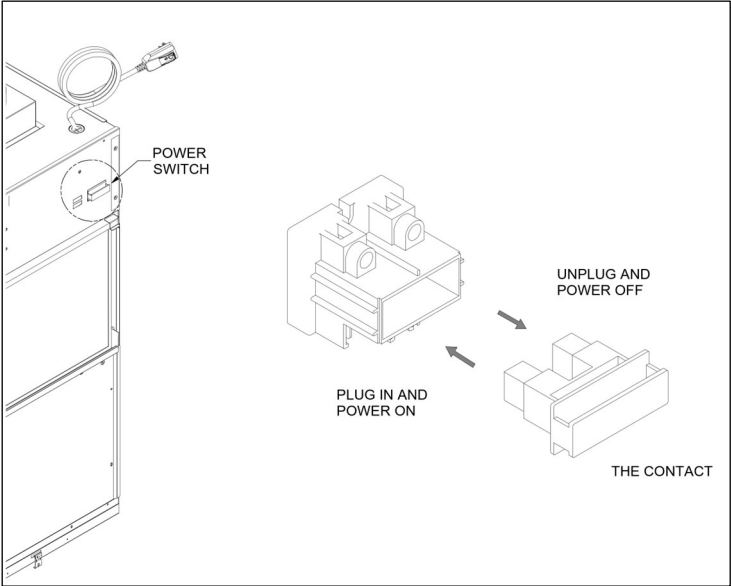
SEE NEXT PAGE FOR PART NUMBERS
*PART HAS MULTIPLE VARIATIONS

10 OPERATING INSTRUCTIONS

Start Up Checklist

Note: Units are to be installed and checked for proper function by qualified service personnel ONLY. Check the following:

- Unit is installed in compliance with all codes and ordinances.
- Circuit breakers and receptacles are correct.
- Filter clean and in place.
- All panels in place.
- Condenser coil inlet and outlet free of obstructions and is sealed to louver.
- Evaporator air inlet and outlet are free from obstructions and properly sealed.
- Control operation OK.
- Owner or operator is instructed on control operation and routine maintenance.
- Work area is clean and free of debris.
- The power switch is located on the front of the unit. To turn on the unit, insert the contacts into the switch. To turn off the unit, pull the contacts out of the switch.



WARNING:

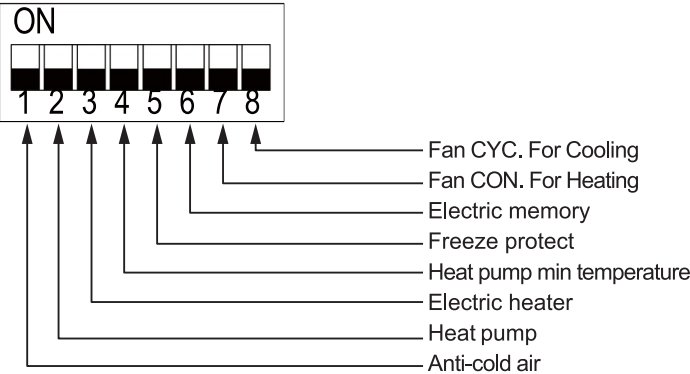
The on/off switch will remove power from the unit. But the power cord terminal is still energized with line voltage and must not be touched. You MUST DISCONNECT POWER before repairing or service.

Note: Smoke and odor can occur on initial operation of the heater due to processing residue and/or oil on the heater element. Leave the area serviced by the unit until it is ventilated of any smoke and/or odors by opening doors and windows.

Each unit has 'built-in' tools to assist the technician in the troubleshooting of the entire system. Diagnostic Maintenance provides detailed information on Space Constrained Products control operation and operational status including present modes, failures, airflow restriction warnings, operating temperatures, and past failures.

Switch Setting

1. Switch 1



Switch	Description	Function	Factory Setting	Option
1#	Anti-cold air	ON-enable OFF-disable	ON	OFF
2#	Heat pump	ON-enable heat pump; OFF-disable heat pump.	ON	OFF
3#	Electric heater	ON-enable electric heat; OFF-disable electric heat.	ON	OFF
4#	Heat pump min temperature	ON-heat pump min operating temperature is above 37°F OFF-heat pump min operating temperature is above 5°F	OFF	ON
5#	Freeze protect	ON-enable OFF-disable	ON	OFF
6#	Electric memory	ON-enable OFF-disable	ON	OFF
7#	Fan CON. For Heating	ON-enable OFF-disable	OFF	ON
8#	Fan CYC. For Cooling	ON-enable OFF-disable	OFF	ON

SW1.1—Set to ON, the indoor fan speed is automatically adjusted according to the indoor coil temperature. Set to OFF, the indoor fan speed is not affected by the indoor coil temperature.

SW1.2—Set to ON, heat pump enable. When the outdoor temperature is below 5°F, the heat pump will stop working.

SW1.3—Set to ON, electric heat enable. When the outdoor temperature is below 5 degrees, the heating mode is only applicable to electric heating.

SW1.4—Default setting is OFF: the minimum operating temperature of the heat pump is -15°C (5°F). If this switch is put to ON position, the minimum operating temperature of the heat pump is 3°C (37°F).

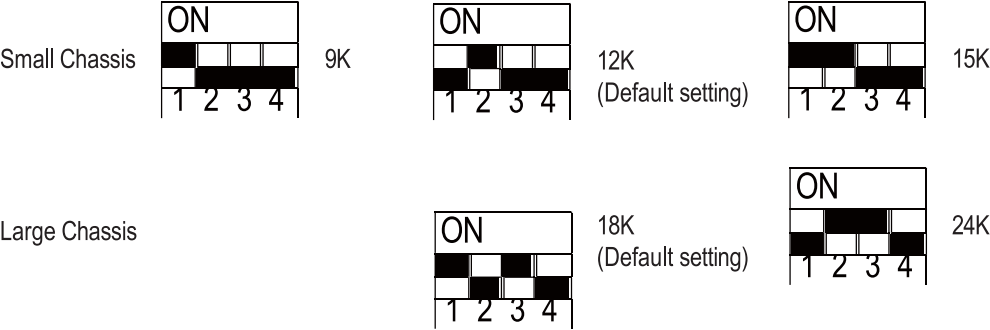
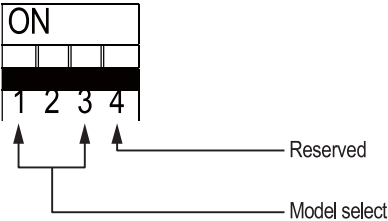
SW1.5—Works only when SW1.3 is ON. When room temperature is lower than 50°Fcontinuously for 3 minutes, unit will automatically start the electric heating. Only when the room temperature reaches 55°Fwill heating be stopped.

SW1.6—If the unit cut out of power during the operation, when it is powered up again, all last setting will be remembered, and the operation will follow the last mode. Manual turn on the unit; operation mode will the last setting.

SW1.7—Default setting is OFF. In heating mode when compressor is OFF, indoor fan will be OFF too (Only valid in operation panel mode).

SW1.8—Default setting is OFF. In cooling mode when compressor is OFF, indoor fan will continuously run. If this switch is put to ON position, when compressor is OFF, indoor fan will be OFF (Only valid in operation panel mode).

2. Switch 2



The capacity range of each model are as follows

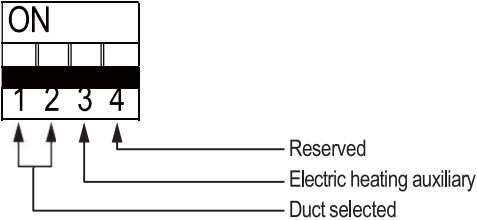
Model Select		Cooling Capacity Range*	Heating Capacity Range**
Small Chassis	9K	5700~10000	6000~10400
	12K(default)	5700~13000	6000~12700
	15K	7400~15300	7300~14800
Large Chassis	18K(default)	8600~18600	11000~18700
	24K	10300~22400	11000~20800

*Cooling Capacity tested at Indoor temperature (DB/WB) 80/67°F, outdoor temperature (DB/WB) 95/75°F.

**Heating Capacity tested at Indoor temperature (DB/WB) 70/60°F, outdoor temperature (DB/WB) 47/43°F.

All data were tested at 0.3in ESP.

3. Switch 3



Duct selected

The duct select function allows the indoor fan to be operated at 3 variable fan speeds, the default setting is fan speed 1. Fan speeds selection is as follows:



FAN SPEED 1



FAN SPEED 2



FAN SPEED 3

COOLING MODE CFM		FAN SPEED 3		FAN SPEED 2		FAN SPEED 1	
Model	ESP	Hi	Lo	Hi	Lo	Hi	Lo
9K/12K	0.00	630	560	560	495	465	430
	0.05	605	525	525	465	435	385
	0.10	580	495	495	430	390	335
	0.15	545	455	455	390	315	255
	0.20	510	385	385	310	--	--
	0.25	425	320	320	250	--	--
	0.30	390	290	290	225	--	--
15K	0.00	665	615	590	545	495	445
	0.05	640	585	560	510	465	405
	0.10	610	555	530	480	430	360
	0.15	585	525	495	440	390	280
	0.20	550	490	440	365	--	--
	0.25	480	415	365	305	--	--
	0.30	440	365	330	275	--	--
18K	0.00	885	850	815	780	745	695
	0.05	860	820	780	745	705	685
	0.10	820	790	745	715	665	620
	0.15	785	755	715	675	620	575
	0.20	745	720	670	635	570	530
	0.25	705	685	635	590	520	445
	0.30	675	635	590	525	450	365
24K	0.00	935	850	885	780	815	695
	0.05	900	820	860	745	780	685
	0.10	870	790	820	715	745	620
	0.15	840	755	785	675	715	575
	0.20	795	720	745	635	670	530
	0.25	760	685	705	590	635	445
	0.30	720	635	675	525	590	365

HEATING MODE CFM		FAN SPEED 3		FAN SPEED 2		FAN SPEED 1	
Model	ESP	Hi	Lo	Hi	Lo	Hi	Lo
9K/12K	0.00	615	560	545	495	465	430
	0.05	585	525	510	465	435	385
	0.10	555	495	480	430	390	335
	0.15	525	455	440	390	315	255
	0.20	490	385	365	310	--	--
	0.25	415	320	305	250	--	--
	0.30	365	290	275	225	--	--
15K	0.00	665	615	590	545	490	445
	0.05	640	585	560	510	460	405
	0.10	610	555	530	480	420	360
	0.15	585	525	495	440	360	280
	0.20	550	490	440	365	--	--
	0.25	480	415	365	305	--	--
	0.30	440	365	330	275	--	--
18K	0.00	885	850	815	780	745	695
	0.05	860	820	780	745	705	685
	0.10	820	790	745	715	665	620
	0.15	785	755	715	675	620	575
	0.20	745	720	670	635	570	530
	0.25	705	685	635	590	520	445
	0.30	675	635	590	525	450	365
24K	0.00	915	850	845	780	780	695
	0.05	885	820	810	745	745	685
	0.10	855	790	780	715	715	620
	0.15	820	755	745	675	675	575
	0.20	785	720	705	635	635	530
	0.25	750	685	670	590	590	445
	0.30	710	635	625	525	525	365

Your airflow should be balanced based on many factors such as available ESP room CFM. and ductwork. Consult an HVAC engineer for proper applications. External static pressure (ESP) can be measured with a manometer or pitot tube. Once this ESP is established you can calculate the CFM using above chart.

Electric heating auxiliary

When switch 3.3 is set in the up position (ON) and the outdoor temperature drop below 35°F, an electric heating will be turned on together with the heat pump. When the indoor temperature rises, the electric heating will also turn off. When switch 3.3 is set in the down position (OFF), electric heating will not be turned on together with heat pump.

The electric heating enabled by this function is as follows :

Electric Heater(kW)	Turn on
3.4kW (2.5+0.9)	0.9kW
5kW (3+2)	2kW
7.2kW (5+2.2)	2.2kW

Only when SW1.2 and SW1.3 are selected on this function is in effect.

Control Panel Mode Setting

If the unit needs to operate with the control panel or connected to Wi-Fi, the operation mode should be selected control panel mode at SENIOR OPERATION.

Under OFF mode, press **[MODE]** and **[FAN SPEED]** buttons at the same time continuously for 5 seconds. This time display 'd0' , indicates that system has entered the senior operation status.

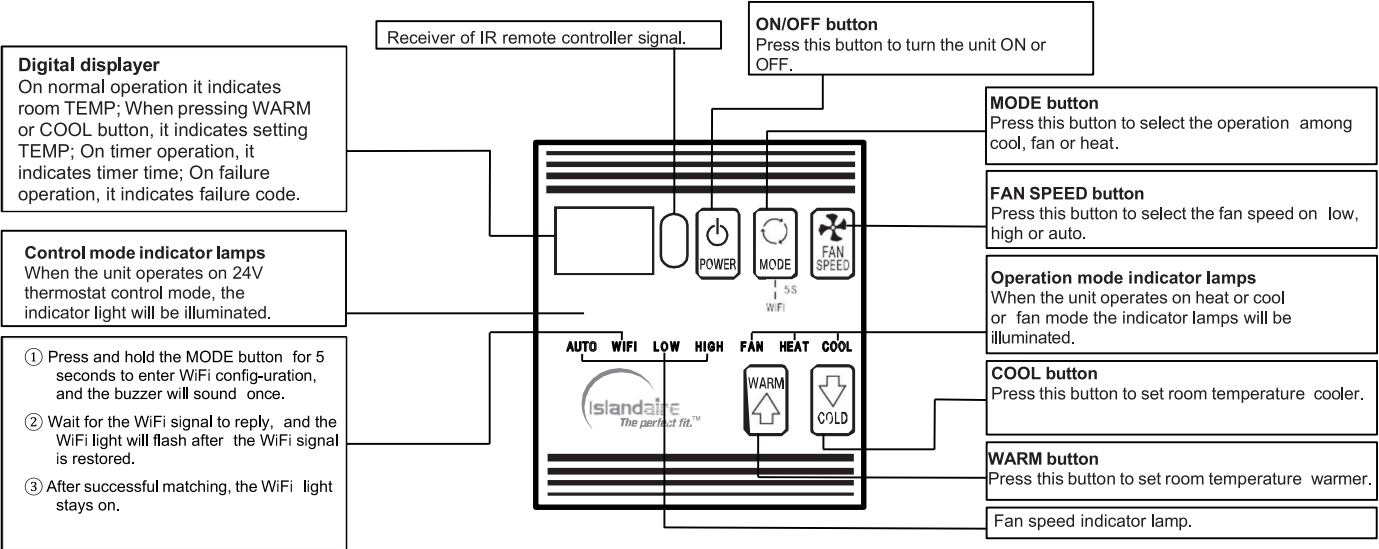
The **[MODE]** button is used to switch parameter codes and parameter values.

The **[WARM]** and **[COLD]** buttons are used to switch parameter codes or set parameter values.

The **[ON/OFF]** button is used to save and exit setting.

The following table shows the senior operation functions and setting parameters:

Parameter code	Function	Parameter value	Explanation
d0	Temperature unit selection	F	Fahrenheit(default)
		C	Celsius
d1	Mode of operation selection	P	Unit is operated with control panel
		r	Unit is operated with 24V universal remote thermostat
d2	Setting temperature higher limit	22°C/°Fto 32°C/90°F	Setting temperature range : 72°Fto 90°F(22°Cto 32°C) default value: 32°C/90°F
d3	Setting temperature lower limit	16°C/60°Fto 22°C°F	Setting temperature range : 60°Fto 72°F(16°Cto 22°C) default value: 16°C/60°F
d4	Indoor temperature true calibration	-9°Cto 9°C	If temperature not is changed, calibration should be done again. If use the default value, it can be ignored. (default 0°C/0°F)
		-9°Fto 9°F	
d5	Temperature display selection	0 or 1	Select 1: Display room temperature
			Select 0: Display setpoint temperature



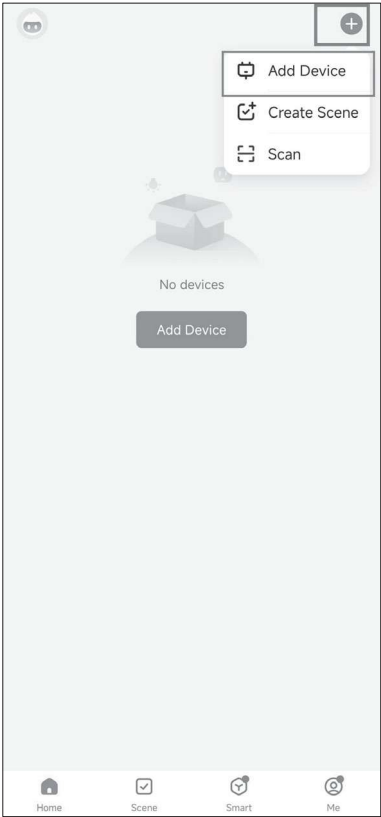
Use of unit mounted control panel

App Instructions

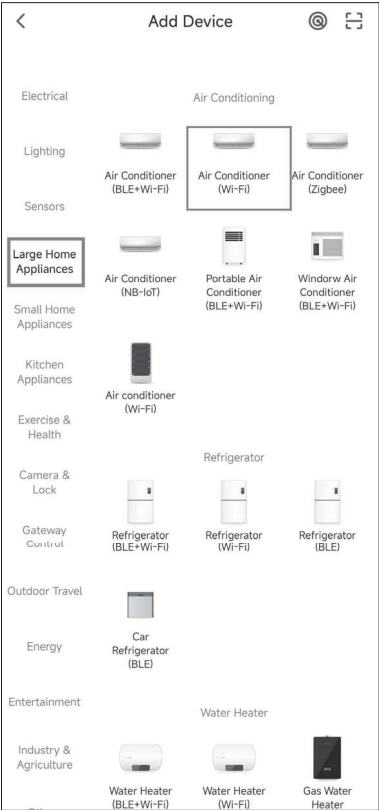
1. Scan the QR code below to download the Islandaire app.



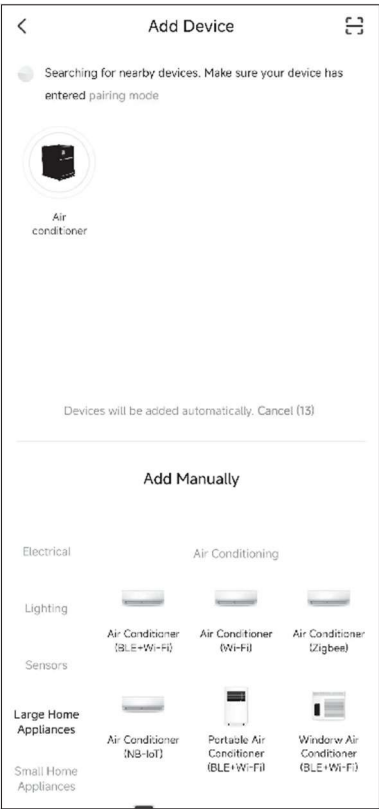
2. Open the Islandaire app and click "Add Device".



3. Choose the "Air Conditioner" from the "Large Home Appliances".



4. Press and hold the "MODE" button on the operation board for 5 seconds, the buzzer will sound once and enter the network distribution state. The Islandaire module responds and the LED of Wi-Fi will flash.



5. Once the device is discovered, tap "Add". Enter the Wi-Fi name and password;



6. After pairing is successful, the Wi-Fi light will always be on, and the Islandaire app will enter the control interface. The meaning of each failure code that may appear on the display is described in the table below:

Error Code And Solutions

Error Code	Meaning	Solutions
E1	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.
E2	Indoor Temp Sensor Open/Short	➔ Check the plug is firmly connected. If the sensor is broken, replace it.
E3	Indoor Coil Sensor Open/Short	➔ Check the plug is firmly connected. If the sensor is broken, replace it.
E4	Outdoor Temp Sensor Open/Short	➔ Check the plug is firmly connected. If the sensor is broken, replace it.
E6	Outdoor Coil Sensor Open/Short	➔ Check the plug is firmly connected. If the sensor is broken, replace it.
E7	EEPROM Error	➔ Update EEPROM program. If still not resolved, replace the main board.
E8	Main board failure/Fan failure	➔ Check the motor wiring is correct. If the connections are correct, check whether the motor is running properly. If the motor does not work properly, replace the motor. If the motor is running normally, then replace the main board.
Ed	Compressor Fail Starting/DC-Inverter Fail	➔ Check DIP switch SW2 on the main board is correctly matched with the unit capacity, refer to the wiring diagram. ➔ Make sure the compressor power cord is firmly and correctly connected.
P1	DC Over/Under Voltage Protection	➔ Make sure the power supply is within the requirement (208/230Vac, -10%+10%).
P3	IPM Over Heat or Over Current Protection	➔ Make sure indoor and outdoor unit vents are not blocked. ➔ Check DIP switch SW2 on the main board is correctly match with the unit capacity, refer to the wiring diagram. ➔ Make sure the compressor power cord is firmly and correctly connected.
P4	Compressor Discharge Over Heat Protection	➔ Make sure indoor and outdoor unit vents are not blocked. ➔ Check DIP switch SW2 on the main board is correctly match with the unit capacity, refer to the wiring diagram. ➔ Check if the unit refrigerant is leaking. If so, replenish the refrigerant.
P5	Cooling/Heat Pump Over Load, Outdoor/Indoor Coil Over Heat	➔ Make sure indoor and outdoor unit vents are not blocked. Clear the air filter and the condenser after extended use.
P6	IPM(DC-INVERTER) Protection (Include Heat sink Over Heat)	➔ Check the wiring of compressor to the IPM(U/V/W) terminals are correctly connected. Wrong phase connection is not allowed. ➔ Remove obstacles in the air path that resists heat interchange.
PL	Low Pressure Protection	➔ Check if the unit refrigerant is leaking. If so, replenish the refrigerant. ➔ Check the EXV plug, make sure the wire connections are OK.

Normal Operating Sounds And Conditions

Water trickling sounds

Water is picked up and distributed over the coil. This improves 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 his 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 the 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" (0.1sec) as response when receiving the effective order from key pad control and remote control.

11 OPERATIONAL PRACTICES

- Do NOT block airflow. Efficient operation of the unit depends on free circulation of air over the coils. Paper, leaves, and other debris can reduce efficiency and cause serious damage to the compressor.
- Ensure that objects such as drapes, furniture, or plants are not blocking supply and return airflow.
- Do NOT operate unit with front panel removed or without a filter, as this will void any warranties.
- Keep doors and windows closed. Leaving them open will increase the workload on the unit and will result in higher operating costs and excessive condensate.
- Do NOT operate unit during construction. Construction dust can clog the filter and cause permanent damage to other components.

Heat Pump Units

A heat pump operates by reversing the refrigeration cycle, absorbing heat from the outside air, and transferring this heat to the indoor air. The heat output of the heat pump reduces as outdoor temperature drops. As a result, discharge air temperature may not be sufficiently warm to provide heating comfort in certain locations. In these locations, an optional backup heater may be required. If the outdoor temperature drops low enough, the compressor (heat pump) will lock out entirely.

Activating Emergency Heat Operation

- Turn off power to the unit.
- Remove the panels to gain access to the Control Board. To activate emergency heater, turn off Heat Pump (SW1.2).
- Re-power the unit and select the heat mode.
- When the emergency heater function is no longer required, be sure to reset the Heat Pump (SW1.2) to on position.

12

ROUTINE MAINTENANCE

 **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.

 **WARNING**

FLAMMABLE REFRIGERANT

THE AREA SHALL BE CHECKED WITH AN APPROPRIATE REFRIGERANT DETECTOR PRIOR TO AND DURING WORK, TO ENSURE THE TECHNICIAN IS AWARE OF POTENTIALLY FLAMMABLE ATMOSPHERES. ENSURE THE LEAK DETECTION EQUIPMENT BEING USED IS SUITABLE FOR USE WITH FLAMMABLE REFRIGERANTS (NON SPARKING), ADEQUATELY SEALED AND/OR IS INTRINSICALLY SAFE.

UNDER NO CIRCUMSTANCES SHALL POTENTIAL SOURCES OF IGNITION BE USED IN THE SEARCHING FOR OR DETECTION OF REFRIGERANT LEAKS. A HALIDE TORCH (OR ANY OTHER DETECTOR USING AN OPEN FLAME) SHALL NOT BE USED.

 **WARNING**

FLAMMABLE REFRIGERANT

ONLY USE A2L APPROVED SERVICE EQUIPMENT.

FOR SPECIFIC INFORMATION ON THE TYPE AND AMOUNT OF REFRIGERANT USED, REFER TO THE MODEL NAMEPLATE ON THE UNIT.

 **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.

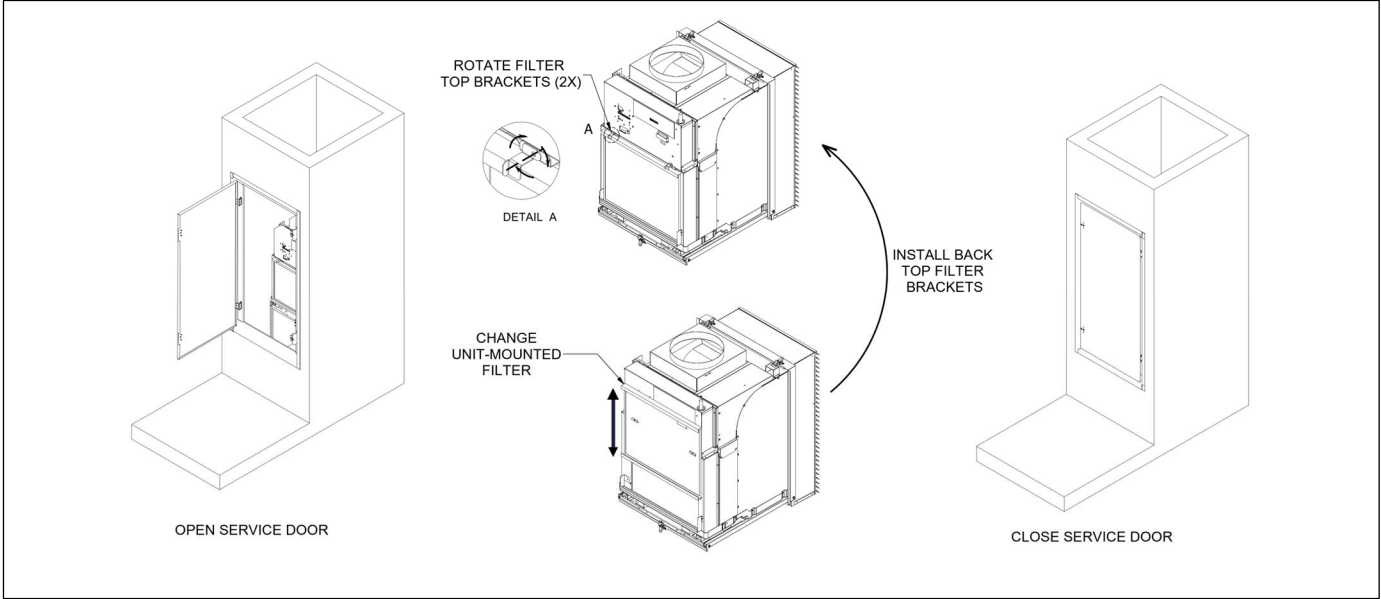
1. Create a water tight seal by tightly covering the entire control panel area and fan motor with plastic. Creating this seal prevents liquids from entering the control area or the fan motor and damaging the unit.
2. Spray condenser coil and base pan down with water. Next spray a mild biodegradable detergent 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 algaecide in the base pan to inhibit bacteria growth. Ensure the algaecide is compatible with wet coil operation and is not corrosive to the coil.

To maintain optimum performance, keep the air intake filter clean. A dirty filter reduces the efficiency of the system and can cause erratic performance of controls. It can also result in damage to the heating element and compressor. Inspect and clean the filter at least once a month or more often as conditions dictate. Replace as necessary with a factory approved filter. Changing the filter will decrease cost of operation, save energy, prevent clogged heat exchanger coils and reduce the risk of premature component failure.

Note: Do not operate the unit without the filter in place. If a filter becomes torn or damaged, it should be replaced immediately. Operating without the filter in place or with a damaged filter will allow dirt and dust to reach the indoor coil and reduce the cooling, heating airflow and efficiency of the unit. Filter size required is 16"H x 20"W x 1"D.



- Coils should be inspected periodically for lint build-up, dirt, leaves, other debris, and for bent fins.
- Clean coils with a soft brush and compressed air or vacuum. Do NOT use sharp objects to clean coils.
- Clean the drain system regularly to prevent clogging.
- In some installations, dirt or other debris may be blown into the unit from the outside and settle in the base pan at the bottom of the unit. Check it periodically and clean, if necessary.
- The fan motors are permanently lubricated and do not require re-oiling.
- In areas of heavy snow and ice accumulation, snow and ice should not be permitted to accumulate against the unit. As soon as practical after such inclement weather, clean snow and ice from around the unit as much as possible, and from the filters of the unit.
- If the unit is installed during the winter, be sure the outdoor fan turns freely before turning it on.

13

TROUBLESHOOTING GUIDE

SYMPTOM	CAUSE	CHECK/CORRECTION
Unit does not properly control room temperature, runs continuously, or causes abnormal cycles in heating or cooling mode.	Case seals worn or missing allowing outdoor air to be passed over the thermostat-sensing bulb.	Inspect and replace it if necessary.
	Defective thermostat.	Test and replace it if necessary.
	Thermostat bulb is not properly located.	Ensure bulb is placed in return air stream.
Compressor short cycles.	Low voltage.	Check input voltage with unit running and ensure it is within rating plate limits.
	Restricted condenser air.	Check for dirt or other condenser coil restrictions. Clean as necessary.
	Recycling condenser air.	Check for inadequate discharge air installation clearances. Coil not sealed against grill. Unit may not be completely pushed into case.
	Condenser fan motor operating intermittently, rotating slowly or not at all.	Check free rotation of motor shaft. Check voltage to the motor. Check motor capacitor. Check for miswiring. Motor may be seizing internally. Motor may have open windings, if so, replace motor.
	Thermostat bulb or thermistor is not properly located.	Ensure bulb is located at original factory specified location (In return air).
	Faulty or incorrect compressor overload.	Check for correct overload model number and replace if incorrect. Otherwise, if running amps seem normal, replace overload.
	Indoor coil freezing.	See "Evaporator coil frosts".
	Recycling of indoor air.	Ensure that curtains or other obstructions are not short-circuiting air between the outlet grille and return air intake.
	Compressor running too slow and drawing high amps.	Compressor may be miswired. Check capacitor. Compressor may be seizing – if so, replace compressor.

SYMPTOM	CAUSE	CHECK/CORRECTION
Compressor will not run.	Fuse or circuit breaker tripped.	Replace or re-test as necessary.
	Defective switch.	Test and replace it if necessary.
	Defective thermostat.	Test and replace it if necessary.
	Indoor room temperature is below thermostat set point.	Lower thermostat setting if comfort is not yet achieved.
	Indoor room temperature below 65 °F.	Cooling will not operate if the room temperature is below 65 °F.
	Outdoor temperature is too cold.	Compressor is not intended to operate at cold outdoor temperatures (below 35 °F).
	Broken, shorted, loose, or miswired wiring.	Inspect and correct.
	Defective compressor capacitor.	Test and replace it if necessary.
	Defective compressor overload.	Test and replace it if necessary.
	Low voltage or no voltage to compressor.	Check voltage and ensure that it is within rating plate limits.
	Compressor windings open.	Disconnect overload from compressor terminals. Check for winding resistance across all winding pairs C-S, C-R, S-R and check each terminal to the compressor shell for ground faults. Replace compressor if any windings are open-circuited or short-circuited to the shell.
	Seized compressor.	If all of the above check out are OK and if pressures are equalized and compressor draws high amps and will not start, compressor is seized and needs to be replaced.
Unit trips fuse/circuit breaker.	Shorted or incorrect wiring.	Check all connections. Also, check for shorts within devices such as motors, switches, heaters, etc.
	Shorted capacitor.	Test and replace it if necessary.
	Compressor short cycling.	See "Compressor short cycles".
	Power was interrupted by the unit.	Wait three minutes before restarting.
	Fuse or breaker setting too low.	Check rating plate fuse size.
	Broken, shorted, loose, or miswired wiring.	Inspect and correct.
	Low voltage or no voltage.	Check voltage with unit running and ensure it is
		within specifications.
	Seized or slow running compressor.	See above.

SYMPTOM	CAUSE	CHECK/CORRECTION
Evaporator coil frosts.	Dirty air filter. Clean or replace.	Clean or replace.
	Dirty evaporator coil. Clean as necessary.	Clean as necessary.
	Blower motor operating intermittently, rotating slowly, or not at all.	Check free rotation of the motor shaft. Check voltage to the motor. Check motor capacitor. Check for miswiring. Motor may be seizing. Motor may have open windings or internal overload is defective – if so, replace motor.
	Low refrigerant charge.	Look for telltale signs of low charge. For example, check the frosting pattern starting from a defrosted condition. If the whole evaporator face frosts uniformly at the same time, it indicates that the unit has insufficient indoor airflow. If the frost works its way up the face of the evaporator during operation over time, it indicates low charge. Low running amps, low or no subcooling and excessive superheat are other signs of undercharge. Find and fix the leak and recharge to the refrigerant charge on rating plate.
	Faulty thermostat.	Test and replace it if necessary.
Unit rattles or is noisy.	Defective compressor.	Check and replace it if necessary.
	Refrigerant line hitting.	Bend tube slightly to obtain clearance.
	Loose fan, blower, or motor mounts.	Check and tighten if necessary.
	Rubbing of fan or blower on housing.	Ascertain cause and correct. Check during operation.
No heating.	Indoor room temperature above thermostat set point.	Raise thermostat setting if comfort is not yet achieved.
	Faulty thermostat.	Test and replace it if necessary.
	Faulty fuse or circuit breaker.	Replace it as necessary.
	Defective switch.	Test and replace it if necessary.
	Defective heater.	Inspect and replace it if necessary.
	Automatic limit reset control will not reset.	Check high limit for open circuit and replace if necessary.
	Broken, shorted, loose, or miswired wiring.	Inspect and correct.
	If fuse or circuit breaker is tripped.	Reset breaker and inspect unit to find cause of trip.
Heater output intermittent or insufficient.	Faulty thermostat. Test and replace it if necessary.	Test and replace it if necessary.
	Automatic reset high limit control calibration defective.	Replace high limit.
	Dirty air filter.	Clean or replace.
	Dirty evaporator coil.	Clean as necessary.
	Blower motor operating intermittently, rotating slowly, or not at all.	Check free rotation of the motor shaft. Check voltage to the motor. Check motor capacitor. Check for miswiring. Motor may be seizing internally – if so, replace motor.

SYMPTOM	CAUSE	CHECK/CORRECTION
Water drips from unit.	Unit not properly pitched. Condensate drain is clogged.	Check unit for the required pitch down from indoor to outdoor side and level side-to-side. Readjust as required. Clean condensate drain tube.
	Evaporator drain pan damaged or improperly mounted.	Inspect, realign, or replace drain pan as required.
	Unusually high moisture content in the indoor/ or outdoor air.	Under certain ambient conditions, excessive condensate can be generated, beyond the capacity for the unit to reject via evaporation to the outdoor air stream. If objectionable or frequent, connect to an internal drain system with available optional drain kit.
	Drain holes plugged in bottom edge of base pan on outdoor side (heat pump only).	Inspect and clear blockage.



**R.E. HANSEN INDUSTRIES, INC. DBA
ISLANDAIRE**

**Address: 500 Middle Country Road
St. James, NY 11780**

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

**E-mail: sales@islandaire.com
techsupport@islandaire.com
customerservice@islandaire.com**

Web www.islandaire.com

Doc. No. 6140539 Rev. B 04/15/26



Scan for more information