Product
Data Sheet

Vertical Stack

List price $7,698 / $9,695 w/ERV

CONTENTS

AIO vertical stack is the ideal multi-room solution when a ceiling-mounted unit is not desired or feasible. The compact 12-inch by 25-inch compact footprint uses minimal floor space. This unit is perfect anywhere direct venting or ducting is required with up to 0.6" external static pressure. Use any grille and louvers for maximum design flexibility.

Ephoca is constantly innovating and improving its products and reserves the right to modify product design and specifications without notice and without incurring any obligations.

Ephoca is the US subsidiary of Innova SRL - Via 1° Maggio, 8 – 38089 Storo (TN) Italy.

KEY FEATURES

- **No outdoor unit**
  The single package design means no outdoor unit, freeing up space on rooftops and at ground level and enabling installations in buildings without space for an outdoor unit.
- **Twin rotary BLDC inverter compressor**
  The state-of-the-art twin rotary BLDC inverter compressor operates efficiently, quietly, and with minimal vibration. AIO is ideal for any room or area that requires between 4,000 and 11,000 BTU.
- **Integrated ERV**
  AIO's integrated ERV eliminates the requirement of installing an independent ERV system, ducting, electrical work, and engineering.
- **Recovery plus™**
  With a patent pending innovation, AIO utilizes the heat or cold remaining in the air after passing through the recovery core to lower or raise the temperature of the condenser, enabling a boost in performance and efficiency.
- **Integrated bathroom exhaust system**
  The integrated stale air exhaust can be used for bathrooms and kitchens, maintaining perfect air pressure and eliminating a dedicated exhaust system. Bathroom exhaust can be field swapped to left or right.
- **MERV 13 clean air**
  Clean outdoor air is essential to well-being and safety. The MERV 13 filter ensures that all air entering the room/home is clean and safe. Additionally, stale air is passed through a second MERV 13 filter keeping the ERV core clean.
- **High-efficiency ECM fans with auto ESP**
  High-efficiency ECM fans enable efficient and quiet operation as the EC motor can ramp up or down depending on the need. Automatically adjusted external static pressure ensures correct airflow.
- **Cold climate heat pump**
  The heat pump will operate efficiently down to 5F, and will continue to operate at colder temperatures, even below -5F.
- **1,800 Watt electric heat**
  The electric heat works in conjunction with the heat pump when the heat pump has insufficient power.
- **Intelligent defrosting**
  AIO's intelligent defrosting system means more time heating and less time on reverse cycle defrost.
- **Coil cooling system**
  The condensate mister system drizzles the condensate on the outdoor heat exchanger coils, lowering the coil's temperature and increasing efficiency and performance.
- **Quiet**
  With whisper-quiet operation as low as 27 decibels, the occupant will barely notice AIO is operating.
- **No outside noise infiltration**
  AIO has the lowest STC and OITC rating among comparable units. This means less outside noise intruding into the room day and night.
- **Versatile on/off options**
  AIO's low voltage connection enables connection to any occupancy system, key-card, window sensors, fire alarms, etc.; as long as it can send a signal to AIO via low voltage, the unit can be easily turned on or off.
- **Corrosion protection**
  AIO comes standard with corrosion protection, assuring many years of trouble-free performance.
- **Minimal clearances and compact footprint**
  AIO's compact form with no line sets means there is no need to access the sides of the unit. Mount units with as little as 1/3 inch clearance on all sides. Compact footprints take up minimum space.
- **Leak protection**
  A drain alarm will activate if the drain becomes clogged, and the system will be shut off, preventing water damage.
- **Easy to service**
  AIO can be easily maintained and repaired from the front or bottom of the unit without having to remove the unit from the wall or ceiling. AIO can also be quickly swapped out with a replacement, reducing downtime.
- **Versatile controls**
  AIO includes an on board touch controller and an optional iOS and android app. AIO can be used with optional wall-mounted controllers, including a TFT with 7 day program and third-party controllers from any company using the optional 3rd party kit. An optional BACnet and Modbus module enables interfacing with building management systems
- **10-Year limited warranty**
  An industry-leading ten-year limited warranty provides peace of mind. Comprehensive onsite one-year parts and labor. Nine-year parts warranty on the compressor.

  Available extended on-site comprehensive parts and labor warranty for five, ten and 15 years.

TECHNICAL REQUIREMENTS

Site Requirements

Note: Refer to the full specifications for detailed information about the list of specifications.

- An electrical supply with a grounded 3-prong receptacle.
- The power supply circuit is installed in accordance with the current edition of NEC (ANSI/NFPA 70) and local codes and ordinances. Note: Always consult local and national electric codes.
- Voltage rating of 60 Hz, 208V/230V single phase.
- Properly installed insulated condensate drain line with a minimum of 30% slope if an external drain. An internal drain is highly recommended. If using an external drain on a low floor, ensure that end of drain is above the maximum height of snow buildup. An internal drain is highly recommended.
- Interior clearances are only required to prevent vibrations. Leave at least 1/3" of clearance from any surface. All others clearances are only dependent on ducting.
- Approved louvers installed with best practices to ensure no water into the wall assembly.
- Correctly sized ductwork, installed properly and balanced.
- The unit must be perfectly level on the vertical and horizontal axis.
- The unit must be tight to ducts, with zero leakage between the external ducts and the unit.
- Properly affixed screws to wall studs or other supporting material.
- Unblocked vents on the exterior with no obstacles within 36" of the air intake and discharge.
- An access panel with adequate clearance to be able to access the entire front of the unit for servicing.

Louver Specifications

AIO Vertical stack units can be vented through all kinds of custom and creative solutions. The possibilities are endless, from perforated panels to custom louvers.

There are two critical factors in selecting and sizing a solution that will work with AIO Vertical stack units.

- **Free area:** This area on a louver/grille is open for the air to flow through. The louver, perforated panel, or other solution must have at least the amount of free area as required in the specifications below in the plenum from the unit so that ample air can enter and exit the condenser chamber. A more restrictive solution with a smaller free area can be utilized by enlarging the louver and plenum until the required free area is achieved.

  The minimum free area required is .34 sq feet for the intake vent and .34 sq feet for the exhaust vent.

- **Pressure drop:** Pressure drop is the resistance the louver/grille creates against the airflow. This resistance can create heat build-up inside the condenser portion, causing the compressor to overheat and shut down. A solution with a higher pressure drop than specified can be utilized by enlarging the louver and plenum until the pressure drop is within specification.

  The maximum total pressure for the intake and exhaust ducting (if any) and intake and exhaust louvers combined must be under 0.7" WC.

  To be clear, the entire assembly of ductwork, plenums, and louvers for the complete air circuit, in and out of the system may not exceed 0.7" WC.

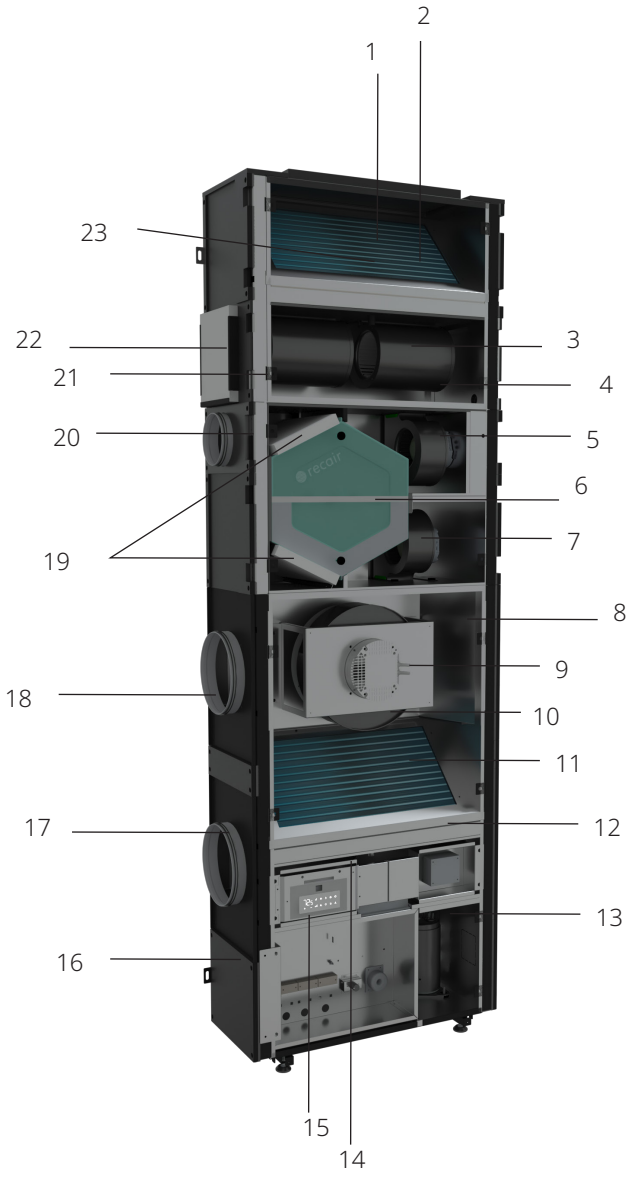
Any louver or louver or assembly must meet these requirements, as exceeding these limits can cause the unit to overheat and fail and void the warranty.
The following louvers are approved for AIO Vertical stack units:

- Sunvent: LLA/C, LLA/M, LLA/S - available through your Ephoca distributor.
- Thermaduct: RLA8- available through your Ephoca distributor.

WHAT'S INSIDE

1.	Top supply air vent
2.	Front supply air vent
3.	ECM supply fan
4.	Return vent
5.	Fresh air ECM supply fan
6.	Hybrid recovery core
7.	Stale air ECM exhaust fan
8.	Condenser + fresh air intake
9.	ECM condenser fan
10.	Condensate mister system
11.	High efficiency outdoor heat exchanger
12.	Condenser + stale air exhaust

13.	Twin rotary inverter compressor
14.	Electrical controls
15.	Touch Controller
16.	Condensate drain
17.	Condenser + stale air exhaust
18.	Condenser + fresh air intake
19.	MERV 13 filter
20.	Side Exhaust (Can be field swapped to the right side)
21.	ECM supply fan
22.	Return vent
23.	High-efficiency indoor heat exchanger

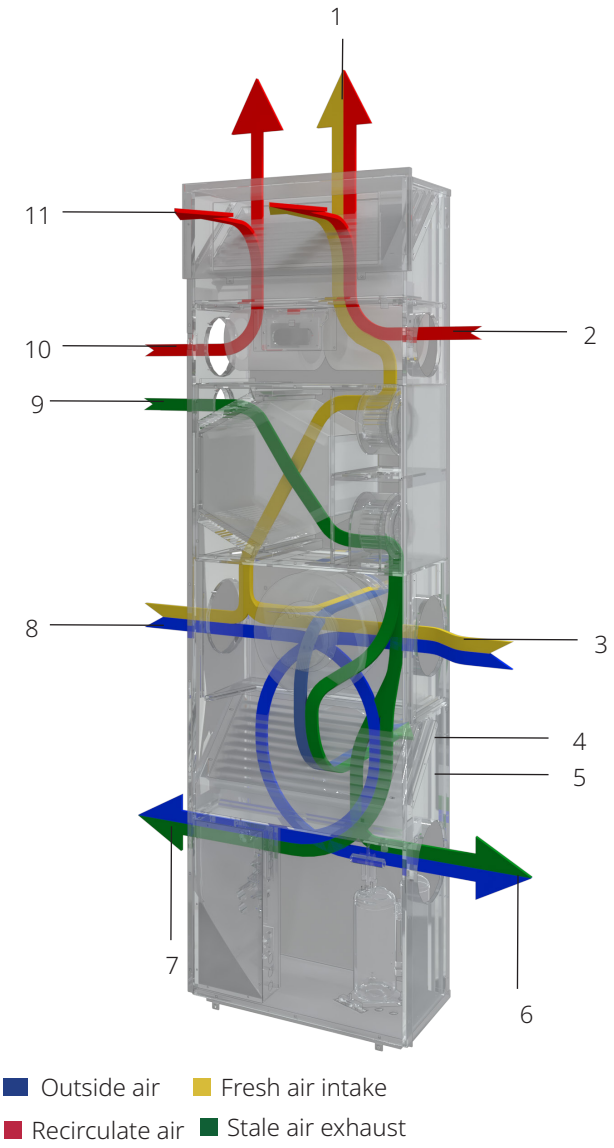


AIRFLOW

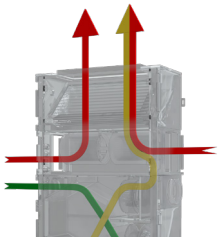
AIO vertical stack is extraordinarily flexible in the many ways it can be fully ducted or used with minimal or no ducting. This flexibility enables vertical stack to be placed anywhere in a dwelling with no restrictions.

- **Supply air**
  The front, rectangular 6.7" x 18" supply air connection is ideal for a supply grille. With 0.6" WC external static pressure (combined between return and supply) the top rectangular 6.7" x 18" supply air connection is ideal for ducting to one or more rooms. For added flexibility, duct part through the top and direct vent part through the front for ducting multiple rooms with minimal ductwork.
- **Stale air exhaust**
  The 5" round stale air exhaust connection can be used as part of a plenum return without any ducting or can be ducted to a bathroom or multiple locations with up to 0.5" WC external static pressure. Can be field swapped to the left or right side.
- **Return air**
  The left and right side 6" WC round connection can be ducted to one or more rooms with up to 0.6" WC external static pressure (combined between return and supply). It can also be left open as a side plenum return. Each connection is fully independent with two ECM fans, each with auto ESP. Duct both, leave both open or duct one, and leave one open to a plenum.
- **Outside air intake**
  The single 8" round outside air intake connection can be accessed from the left, right, or rear and provides outside air for the condenser portion and fresh air. This can be ducted with up 0.7" WC external static pressure (combined between intake and exhaust).
- **Outside air exhaust**
  The single 8" round exhaust air connection can be accessed from the left, right, or rear, and exhausts the stale and condenser air. This can be ducted with up 0.7" WC external static pressure (combined between intake and exhaust).
- **Mix and match outside connections for total flexibility.**
  The upper outside connection (left, right, and rear) is for exhaust, and the outside lower connection (left, right and rear) is for supply. It's possible to use any combination of connections. For example: Left for intake and rear for exhaust, or rear for intake, and right for exhaust, etc.

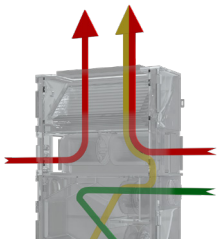
1.	Top supply
2.	Return
3.	Side intake
4.	Rear intake
5.	Rear exhaust
6.	Side exhaust
7.	Side exhaust
8.	Side intake
9.	Stale air exhaust (Can be swapped to the right side\)
10.	Return
11.	Front supply



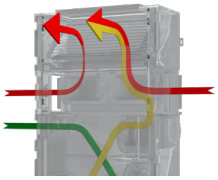
Fan Coil Part



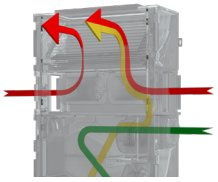
Supply: **Top**
Return: **Left & Right**
Stale Air: **Left**



Supply: **Top**
Return: **Left & Right**
Stale Air: **Right**



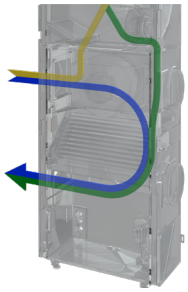
Supply: **Front**
Return: **Left & Right**
Stale Air: **Left**



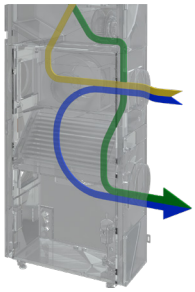
Supply: **Front**
Return: **Left & Right**
Stale Air: **Right**

Recirculate air Stale air exhaust Fresh air supply

Condenser Part

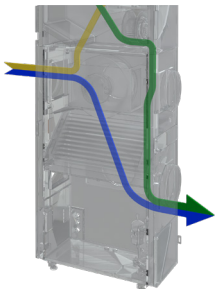


Intake: **Left**
Exhaust: **Left**

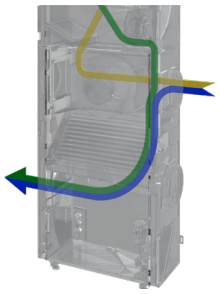


Intake: **Right**
Exhaust: **Right**

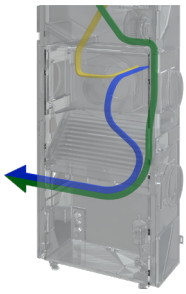
Intake: **Rear**
Exhaust: **Rear**



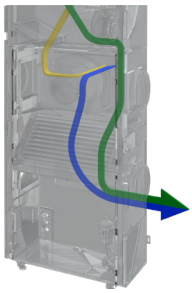
Intake: **Left**
Exhaust: **Right**



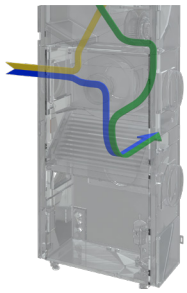
Intake: **Right**
Exhaust: **Left**



Intake: **Rear**
Exhaust: **Left**



Intake: **Rear**
Exhaust: **Right**

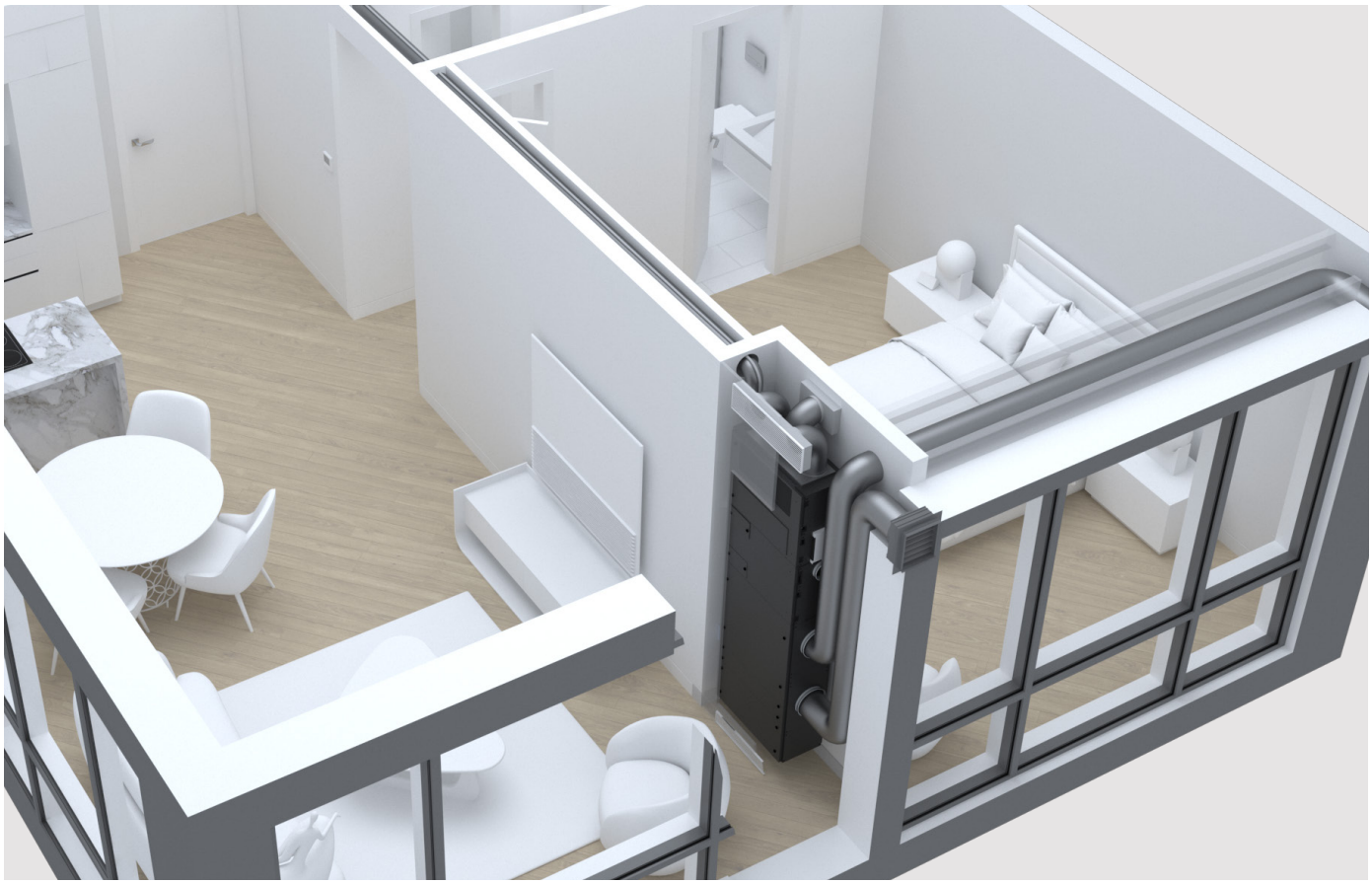


Intake: **Left**
Exhaust: **Rear**

Intake: **Right**
Exhaust: **Rear**

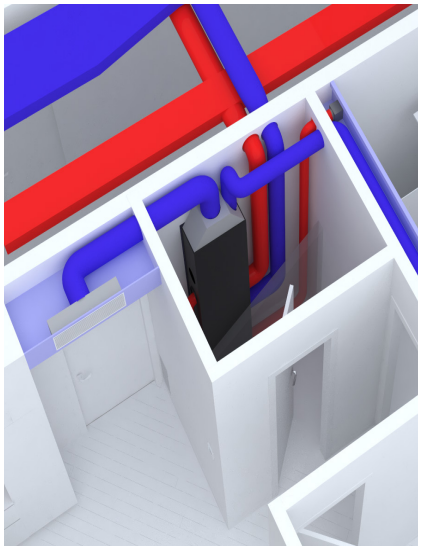
Outside air Fresh air intake Stale air exhaust

INSTALLATION



Left external vent

Right external vent

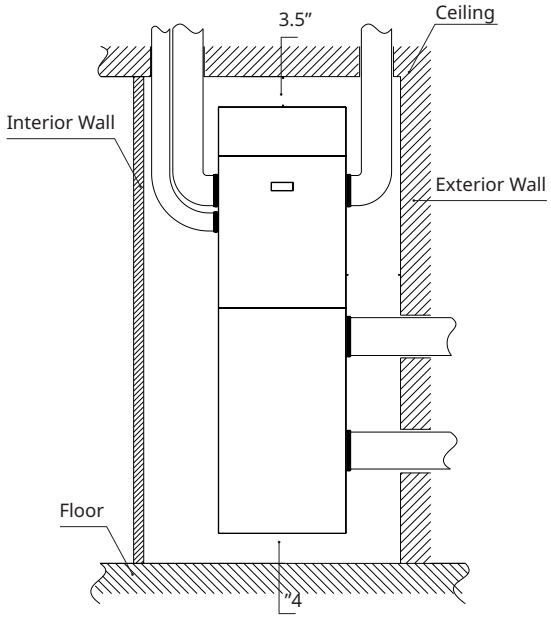


Shared supply and exhaust vents

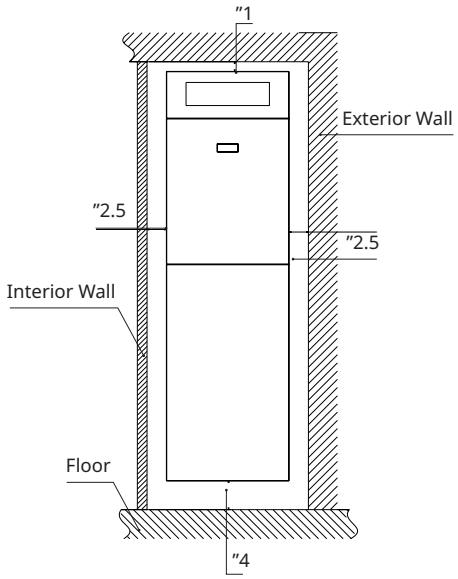
CLEARANCE

The AIO Vertical Stack unit's clearance will depend on how it is vented. Please carefully read the criteria below to determine the correct clearance required.

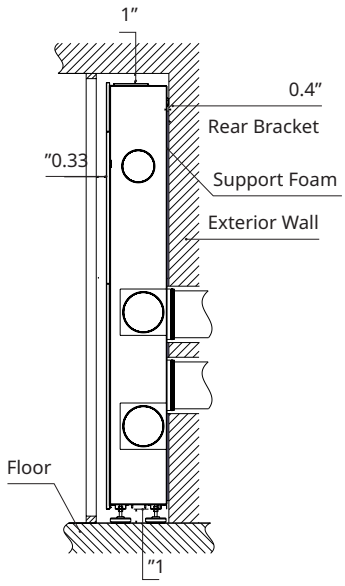
- **Ceiling**
  There must be 1" minimum clearance between the unit and ceiling to minimize noise from vibrations and for removing panels. If ducting through the top, ensure sufficient clearance to attach ductwork to the vent.
- **Bottom**
  There must be a minimum of 1" clearance between the unit and floor to minimize noise from vibrations. The unit sits on adjustable leveling legs, which can be removed and the unit wall hung.
- **Access Panel**
  There must be an access panel of at least the size of the unit plus 1/2 inch all around. The recommended size is 86 x 27. The minimum size is 84.5 x 26. You can integrate a return and supply grille into the access panel door.
- **Sides**
  The clearance required on the sides is dependent on how the unit is configured for return and stale exhaust air.
- **Side ducted return configuration**
  The clearance required is based solely on ductwork design. Ensure sufficient clearance to be able to attach the ductwork to the side return.



- **Side plenum return configuration**
  A minimum of 2.5" should be free for airflow on each side to allow the air to flow into the returns.



- **Front**
  The clearance required in front of the unit to the access panel is 1/3" to minimize noise from vibrations.
- **Rear**
  There must be 1/3" minimum clearance between the unit and wall to minimize noise from vibrations. If ducting the intake and exhaust from the rear, ensure sufficient clearance to attach the ductwork to the rear vents. Ensure that rear external vents do not have any barrier or wall for at least 40".



TECHNICAL SPECIFICATIONS

Cooling		95°F[1]	105°F[2]	115°F[3]
Heat Pump				
Maximum		15,000	13,000	12,000
Nominal	Btu/h	8,900	6,900	7,600
Minimum		3,400	3,400	3,400
Input Power	W	812	923	844
Efficiency		14.36 SEER2	9.00 EER2	7.47 EER2
Moisture Removal	Pts/h	1.9	-	

1 **95°F** Indoor: 80°F, W.B. 67°F; Outdoor: 95°F, W.B. 75°F
2 **105°F** Indoor: 80°F, W.B. 67°F; Outdoor: 105°F, W.B. 75°F
3 **115°F** Indoor: 80°F, W.B. 67°F; Outdoor: 115°F, W.B. 75°F

Heating		47°F[4]	17°F[5]	5°F[6]	0°F[7]	-5°F[8]
Heat Pump (+ Optional 3,000 /6,100 BTU/H elec heat)						
Maximum		15,000	10,800	7,800	7,300	7,000
Nominal	Btu/h	8,300	9,000	6,500	6,100	5,800
Minimum		4,200	3,200	2,700	2,700	2,700
Input	W	664	1,146	1,107	1,070	1,036
Efficiency		9.81 HSPF2	2.3 COP2	1.72 COP2	1.67 COP2	1.64 COP2

4 **47°F** Indoor: 70°F, W.B. 67°F; Outdoor: 47°F, W.B. 43°F
5 **17°F** Indoor: 70°F, W.B. 60°F; Outdoor: 17°F, W.B. 13°F
6 **5°F** Indoor: 70°F, W.B. 60°F; Outdoor: 5°F, W.B. 3°F
7 **0°F** Indoor: 70°F, W.B. 60°F; Outdoor: 0°F
8 **-5°F** Indoor: 70°F, W.B. 60°F; Outdoor: -5°F

Airflow

Fresh air volume		
Indoor	Type	ECM centrifugal
	CFM	125-350
	Available ESP	N/A
	Supply connection	Integrated front
	Return connection	Integrated bottom
	Speeds	Low, med, high, boost, auto
	Filter	MERV 3
Outdoor	Type	ECM centrifugal
	CFM	135-383
	Available ESP	0.7" WC
	Intake connection	8" round
	Exhaust connection	
	Speeds	Low, med, high, auto

ERV

General		
Flow type		Counterflow enthalpy exchanger
Material		Mold and bacteria resistant, washable polymer membrane
ASHRAE compliance		62.1 And 62.2 When used with the ERV module

		40 CFM	60 CFM	80 CFM
Efficiency of core in winter				
Sensible	%	86.7	85.2	83.1
Latent		72.5	65.1	60.3
Efficiency of core in summer				
Sensible	%	71.1	69.4	68.1
Latent		56.2	54.5	51.2
Filter				
Indoor air	MERV	MERV 3 / optional MERV 13		
Outside air		MERV 13		
Leakage				
Internal	WC	2.6% at 0.40"	2.4% at 0.40"	2.2% at 0.40"
External		2.8% at 1.0"	2.7% at 1.0"	2.5% at 1.0"

General

Compressor		
Type		BLDC twin rotary inverter
Refrigerant	Type	R32
	Oz.	23.97
Oil	Type	Fv50s

Controls	
Basic functionality	Dependent on controller
WiFi	Optional module available
Dry contact	Yes
Power outage restart	Auto-on based on last setting

Modes	
Operation	Cool+ fresh air, cool only, heat+ fresh air, heat only, auto
Restricted modes	Heat only, cool only, temperature limiting
Timers	Dependent on controller

Condensate		
Pipe	Size	3/4" Outside diameter
	Material	Rubber

Sound

Sound		
Indoor	dB(A)	27-43
	STC	40
	OITC	35
Outdoor	dB(A)	28-55

Dimensions

Physical data		
Dimensions	Net	41.4" W x 45.2" D x 11.6" H
Weight	Net	170 lb
	Gross	190 lb
Cabinet	Finish	RAL 9003 signal white
	Material	Steel

Electrical

		115V	230V
General			
Volt range		103-127	180-253
Hz/ phase		60 Hz singe phase	
Power supply		Hardwire or LCDI	
Power factor (%)		0.96	
Input power (standby)	W	10.8	10.8
Input power (off mode)	W	1.5	1.5
Cooling (nominal)	A	5.8	2.9
Cooling (max)	A	15.7	7.8
Heat Pump Only			
Heating - heat pump only (nom.)	A	6.1	3.1
Heating - heat pump only (max)	A	16.5	8.3
Heat Pump + 900 W Elec Heat			
Heating - heat pump +900 W Elec Heat (nom.)	A	13.9	7.0
Heating - heat pump +900 W Elec Heat (max)	A	24.3	12.2
Heat Pump + 1,800 W Elec Heat			
Heating - heat pump only (nom.)	A	-	10.6
Heating - heat pump only (max)	A	-	16.1

			115V	230V
Motors				
Compressor	RLA	A	9.5	4.7
	LRA	A	9.5	4.7
Indoor ECM fan motor	W (max)		180	180
	F.L.A.	A	1.6	0.8
	HP		0.24	0.24
Outdoor ECM fan motor	W (max)		190	190
	F.L.A.	A	1.7	0.8
	HP		0.25	0.25

			115V	230V
Circuit breakers				
Heat Pump Only	MCA	A	20	10
	Recommended breaker size	A	20	15
	MOCP	A	35	20
Heat Pump + 900 W Elec Heat	MCA	A	30	15
	Recommended breaker size	A	30	20
	MOCP	A	40	25
Heat Pump + 1,800 W Elec Heat	MCA	A	N/A	20
	Recommended breaker size	A	N/A	25
	MOCP	A	N/A	30

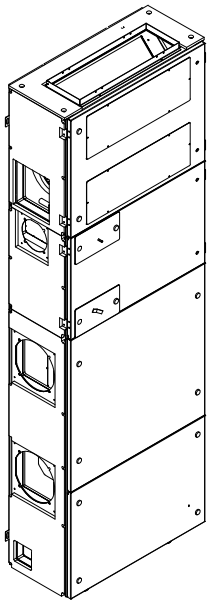
		115V	230V
LCDI Power Cord			
Heat Pump Only	Amps	20	15
	Plug Type	5-20P	6-15P
Heat Pump + 900 W Elec Heat	Amps	N/A*	15
	Plug Type		6-15P
Heat Pump + 1,800 W Elec Heat	Amps		20
	Plug Type		6-20P

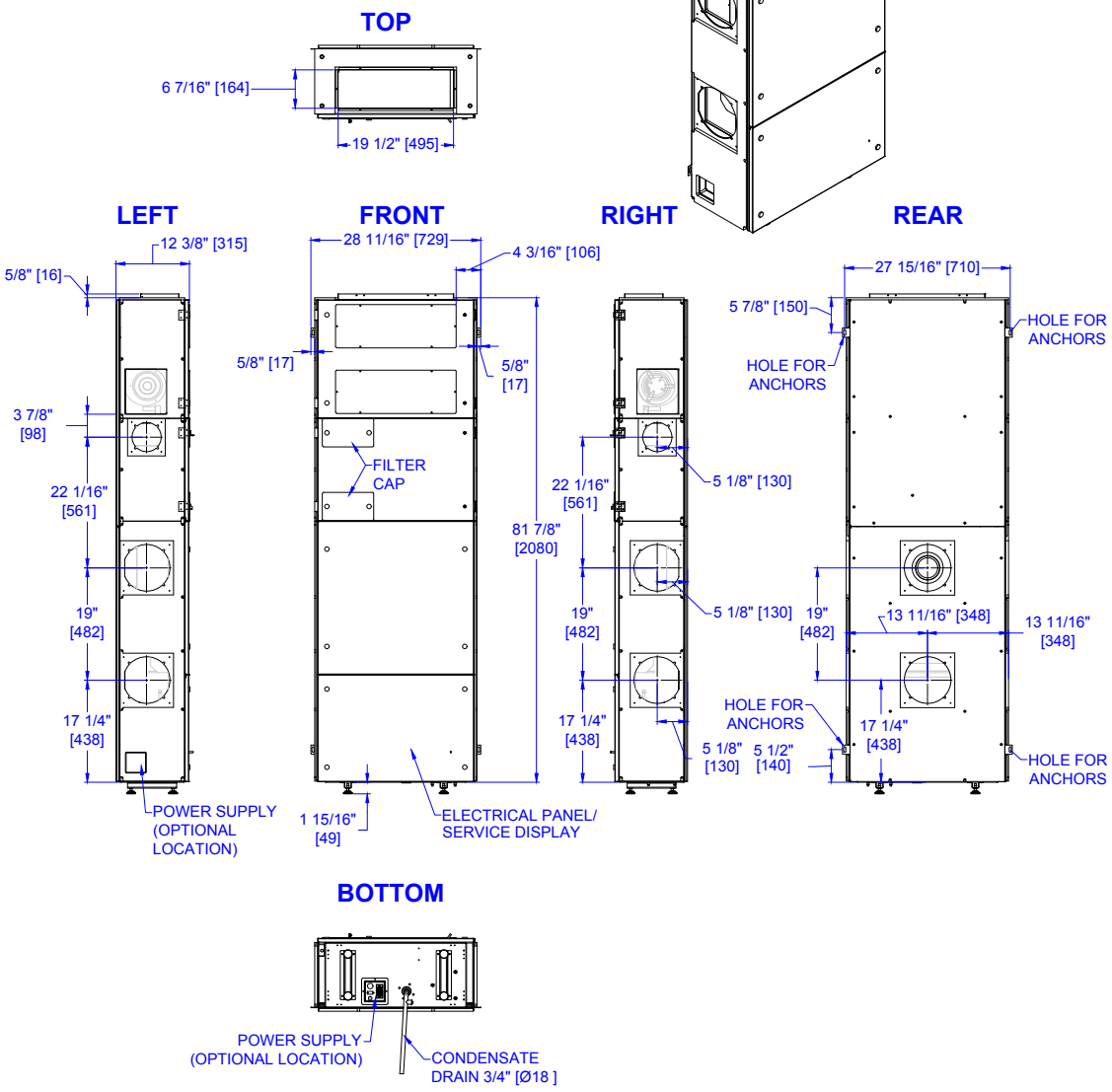
*LDCI cord not available in 115V above 20A

DIMENSIONS

With MERV 13 Filters for Indoor Recycled Air

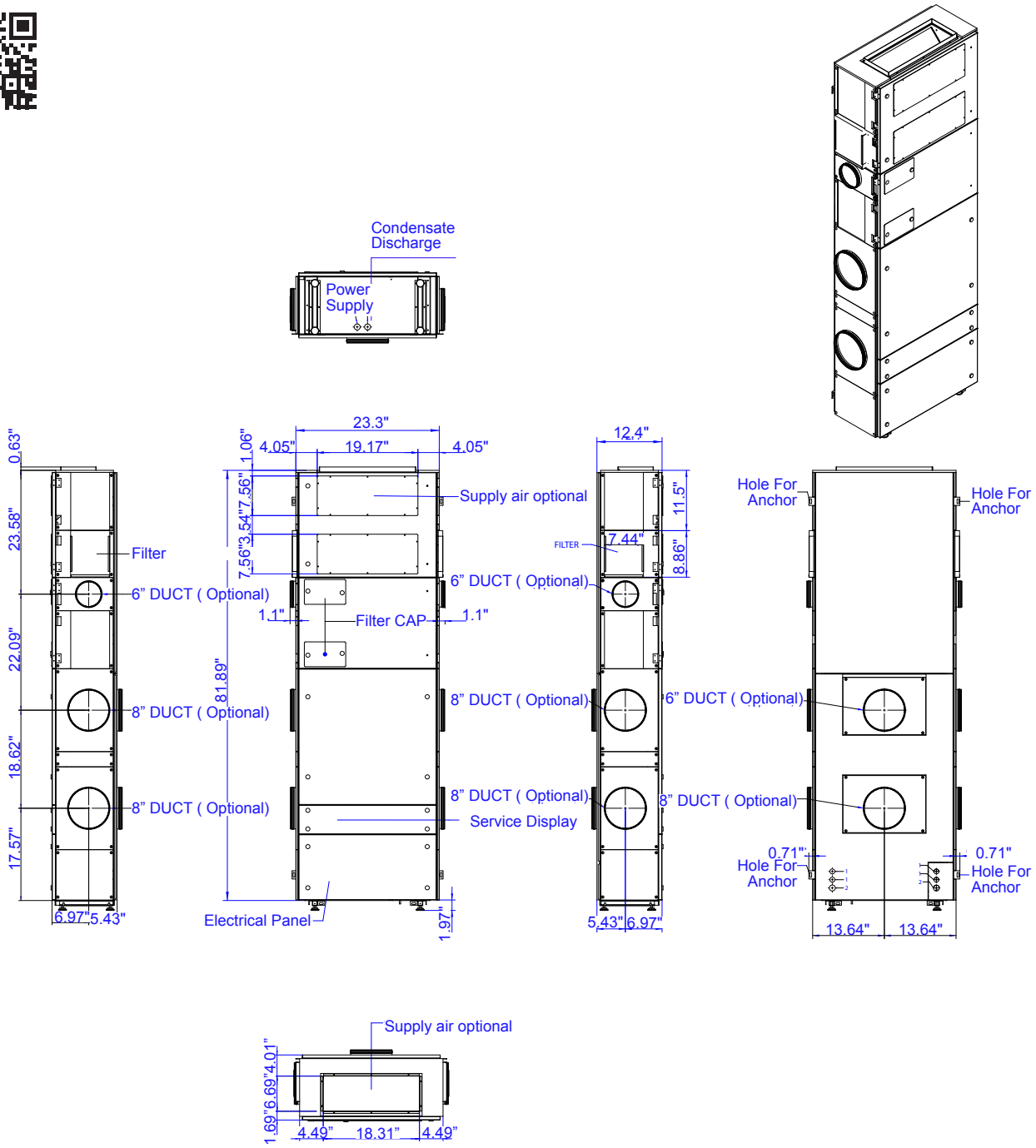
For CAD and DWG files please scan or click the QR code below.





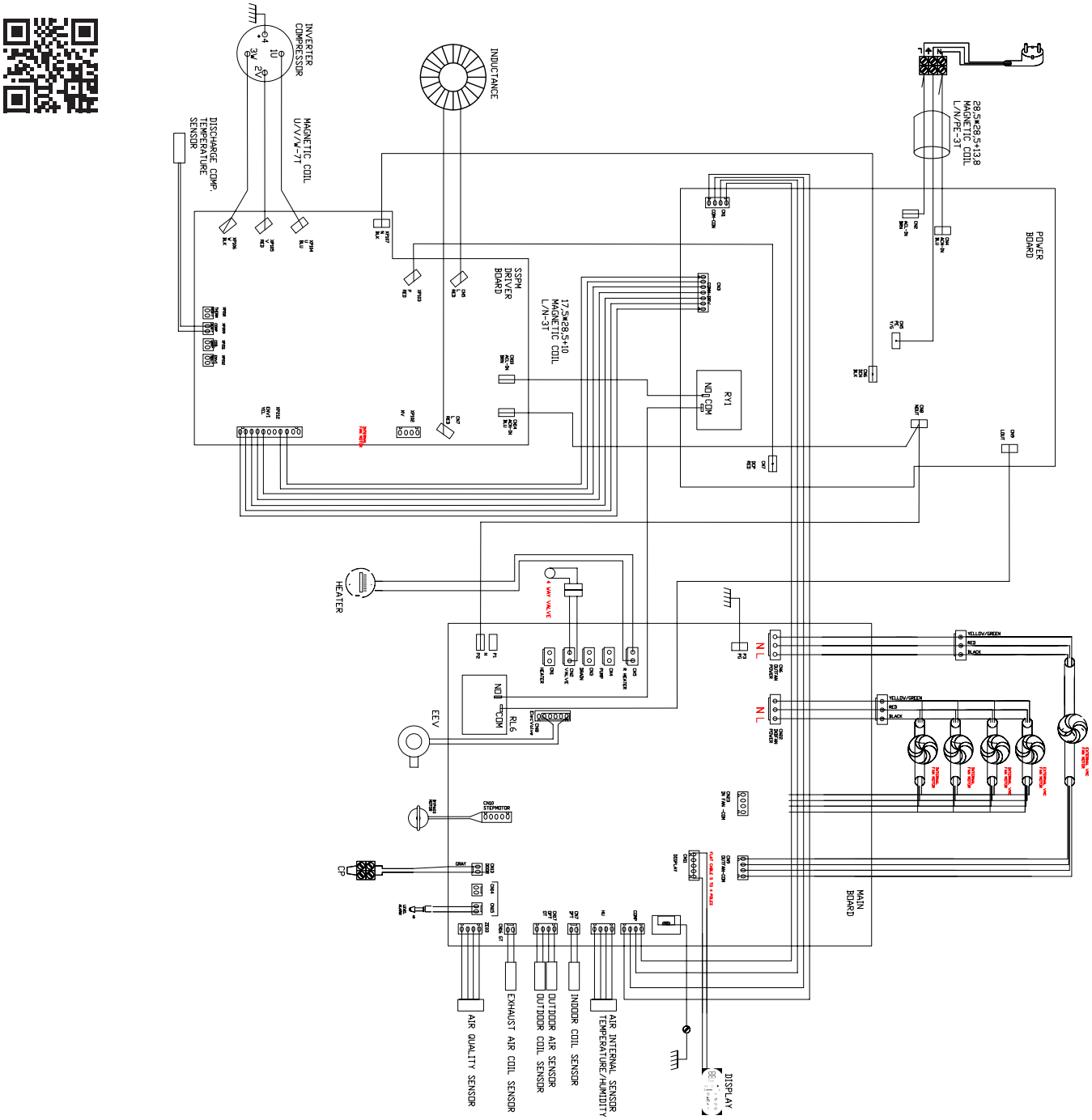
With Standard Filters for Indoor Recycled Air

For CAD and DWG files please scan or click the QR code below.



WIRING DIAGRAM

Heat Pump Only



Notes

230V Electric Heat

DESCRIPTION

Digital inputs:		
CN13	Door	Presence contact for terminals CP (presence contact)
CN15		Drain alarm
Analog Inputs:		
ZE		Internal air quality sensor (placed on inlet air)
HU		Internal air Humidity and temperature Probes (placed on inlet air)
CN17	OT	External temperature probe (placed on external air inlet) NTC 5.28kΩ a 25~C.
CN17	OPT	Condenser probe (placed on pipe of external coil). NTC 5.28kΩ a 25~C.
CN7	IPT	Evaporator probe (placed on pipe internal coils). NTC 5.28kΩ a 25~C.
CN16	GT	Exhaust air probe (placed in exhaust air). NTC 5.28kΩ a 25~C.
XP209		Compressor discharge temperature probe. NTC 58kΩ a 25~C.
Digital outputs:		
CN2	Valve	Reversing valve summer/winter
CN5	Heater	External heater (230VAC/5A)
Analog outputs:		
CN23	Infan	Driving signal 0-10V external fan
CN9	Outfan_con	Driving signal 0-10V external fan
CN11	Display	Display touch connection

WARRANTY TERMS AND CONDITIONS

Ten Year Limited Warranty

This limited warranty is valid in the Continental United States only and only for the AIO series heat pump which was purchased and installed in its original installation location. This warranty is only valid when the AIO series heat pump air conditioner meets all the conditions below:

- Purchased from an Ephoca authorized distributor.
- Installed by an Ephoca certified technician.
- The installation was certified by an Ephoca technician before the AIO series heat pump was used.
- AIO is operated and maintained in accordance with the printed instructions in the user guide and in compliance with applicable local installation and building codes and good trade practices.
- The site must have a minimum of ten (10) units and there must be spare units on site equal to a minimum of three (3) units or 2.5% of installed units, whichever is greater. These spare units must be used to replace a unit with a service issue until an Ephoca technician can be on site.
- A maintenance contract with a professional service provider must be in place to ensure the units are maintained and filters kept clean. You must submit documented filter cleaning every two months. You must submit documented annual unit cleaning.
- For any jobs sold with less than 10 units the distributor/dealer is responsible for all labor costs and responsible for having attic stock for replacements.
- Every job must be inspected before turning on the units, and pictures of at least 10% of the units must be sent to our office. There are no exceptions. The warranty is not valid without a written letter from Ephoca after the installation pictures are reviewed per the self-certification process guide.

What This On-site Warranty Covers

Ephoca, Inc. ("Ephoca") warrants your AIO series heat pump air conditioner ("AIO") against failure due to defects in materials or workmanship under normal use, beginning on date of certification by the Ephoca technician for the following periods:

Full One-Year Warranty

For the period of one year from the date of certification by the Ephoca technician, Ephoca will replace any part of the AIO which fails due to a defect in materials or workmanship. During this full one-year warranty, Ephoca will provide, on-site, free of charge, all labor and related service costs to replace the defective part. If you are located in an area where we do not have Ephoca certified technician, we will ship you a replacement unit at our cost and arrange to pick up the defective unit at our cost.

Limited Ten-Year Warranty On Compressor

For the period of ten-years from the date of certification by the Ephoca technician, Ephoca will replace the compressor part should it fail due to a defect in materials or workmanship. During this limited ten-year compressor warranty, Ephoca will provide a replacement compressor, however, you will be responsible for all labor costs and related service costs.

Optional Extended Five, Ten and Fifteen Year Comprehensive Warranty

A comprehensive extended warranty is available for five, ten, and fifteen years from the date of certification by the Ephoca technician. During this extended warranty, Ephoca will replace any part of the AIO which fails due to a defect in materials or workmanship.

During this extended warranty period, Ephoca will provide, onsite, free of charge, all labor and related service costs to replace the defective part. If you are located in an area where we do not have Ephoca certified technicians, we will ship you a replacement unit at our cost and arrange to pick up the defective unit at our cost. Extended warranties must be purchased directly from Ephoca within 90 days of installation. Controllers carry a two-year warranty; extended warranties exclude labor for wall controllers.

Exclusions and Limitations

The warranty shall not cover:

- Any AIO purchased from a non-authorized or out-of-state dealer.
- The extended warranty does not cover wall controllers.
- Any service, part or repair if AIO has not been certified Ephoca technician prior to use.
- Any failure due to or following unauthorized repairs, or repairs performed by unauthorized personnel.
- Installation of AIO, setup of user controls or adjustments to user controls.
- Instruction on user operation.
- Labor costs after the first year, or service trips to deliver or pick up parts not covered by the warranty.
- Replacement of fuses or circuit breakers, wiring or plumbing connections.
- Damage to AIO where there is a corrosive atmosphere containing any damaging chemical such as chlorine or fluorine (other than that normally occurring in a residential environment).
- Cleaning or replacing air filters.
- Removing AIO from inaccessible locations.
- Correcting improper installations.
- Any AIO not installed pursuant to applicable regional efficiency standards issued by the Department of Energy or other local rules and ordinances.
- Failure of AIO due to acts of God, natural disasters, power failures, interruptions, brownouts or power spikes, or due to incorrect inadequate electrical service or failure of Internet Services or Home Networks.
- Any AIO with altered, missing or defaced serial number.
- Damages or personal injury caused directly or indirectly by failure or malfunction of AIO as a result of any cause including natural disasters, accidents, misuse, improper wiring or installation.
- Any cost of supplemental (replacement) Cooling or heat during equipment failure.
- Any cost to replace, refill or dispose of refrigerant, including the cost of refrigerant.
- Any unit if a documented maintenance plan is not in place prior to installation.

Failure to meet any of these conditions will void the warranty:

- The unit must be in alignment with the intended room's design specification
- Submit documented filter cleaning every two months.
- Submit documented annual unit cleaning.
- Maintain attic stock of at least 3%, with a minimum of 5 units.
- Labor warranty applies only to orders of 10 units or more.
- Submit self-certification photos must be submitted to Ephoca at selfcertify@ephoca.com. Warranty activation requires review, approval, and issuance of a certification.
- Splicing low-voltage thermostat wires will void the warranty.
- Using any other wire (e.g. multi-strand) besides a solid copper C-Wire will void the warranty.
- Customer's account balance must be paid.

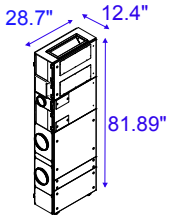
The warranty will be void if any of the following terms are not met:

- Self-certification photos must be submitted to Ephoca at selfcertify@ephoca.com. Warranty activation requires review, approval, and issuance of a certification.
- The unit must be used in alignment with the intended room's design specifications.
- Warranty is void if the customer's account balance remains unpaid.

THIS WARRANTY IS IN LIEU OF ANY OT HER WARRANTY, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. TO THE EXTENT ANY IMPLIED WARRANTY IS REQUIRED BY LAW, IT IS LIMITED IN DURATION TO THE EXPRESS WARRANTY PERIOD(S) ABOVE. NEITHER EPHOCA NOR ITS DISTRIBUTOR SHALL BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL, INDIRECT, SPECIAL, OR PRODUCTIVE DAMAGES OF ANY NATURE, INCLUDING WITHOUT LIMITATION, LOST REVENUES OR PROFITS, OR ANY OT HER DAMAGE WHET HER BASED IN CONTRACT, TO RT, OR OTHERWISE. FOR A PARTICULAR USE OR PURPOSE.
NO ONE IS AUTHORIZED TO CHANGE THIS WARRANTY CER-TIFICATE OR TO CREATE FOR US ANY OT HER OBLIGATION OR LIABILITY IN CONNECTION WITH THIS AIR CONDITIONER. NO OT HER WARRANTY, EXPRESSED OR IMPLIED, IS APPLICABLE TO THIS PRODUCT.
Some states do not allow the exclusion or limitation of incidental/ consequential damages or limitations on how long an implied warranty lasts, so the above exclusion or limitation may not apply to you. This warranty gives you, the original purchaser, specific legal rights; you may also have other rights that vary from state to state. This warranty does not cover any additional responsibilities or obligations not expressly stated herein nor does it apply to any accessory that is not a part of the AIO as included in the package by Ephoca.

AIO VERTICAL STACK - 115V -NO ELECTRIC HEAT - R32 -SUBMITTAL (AVP10R3H1)

Job	Reference	Construction
Location	Approval	Quote Number
Engineer	Date	Drawing Number
Submitted To	Submitted By:	P.O. Number:



General Features

- BLDC inverter compressor
- ECM fans
- R32 Refrigerant
- Auto restart
- Intelligent defrost
- No outdoor unit
- Condensate disbursement systems
- Onboard touch controller
- Integrated ERV
- Washable filter
- Electronically controlled air louver
- Compact, slim design
- 3 selectable fan speeds + Auto
- 10 Year limited warranty includes 1 year parts and labor and Additional 9
- Made in Italy

Performance Specifications

Cooling Capacity (Btu/h)	15,000
SEER2	13.29
EER2	11.43
Rev. Cycle Max Heating Capacity (Btu/h)	15,000
Electric heat (Btu/h)	N/A
Total Heat Capacity w/ Elec (Btu/h)	15,000
HSPF2	8.86
Circulation (CFM)	226-400
Dehumidification (Pts/h)	1.9

1. EER2 and SEER2 are based on nominal capacity of 8,500 Btu/H
2. COP/ HSPF2 are based on nominal capacity of 9,000 Btu/h. COP/HSPF2 only take intro consideration the heat pump and not electric heat

Electric Specifications

Power Supply (V Ph, Hz)	115/1/60
Voltage Range	98 - 120
Running Amps Cooling	15.7
Max Amps Cooling	16.5
Running Amps Heating	20
Max Amps Heating	35
MCA	20
Maximum Overcurrent Protection (A)	1,800
Recommend breaker size	1,800
Max Power Input (watts) Cooling	1,800
Max Power Input (watts) Heating	2,700

Wall Controllers + Gateways

□ Wireless Remote	WRCH20
□ Basic Touch Controller	LTCH20
□ Recessed Touch Controller	RTCH20
□ Advanced TFT Controller with 7-Day program	TFTH20
□ Wireless (AA Battery) Infrared Controller with 7-Day program	WIPT20
□ Third Party Gateway	TPG015
□ Modbus	MODH20
□ WiFi App	WIFI30
□ E-Paper EOS Controller	EEOS12
□ Simple EOS Controller	SEOS12
□ BACnet	BACH20

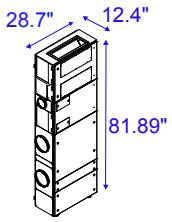
ERV performance

General		
Flow type		Counterflow enthalpy exchanger
Material		Mold and bacteria resistant, washable polymer membrane
ASHRAE compliance		62.1 And 62.2 When used with the ERV module

		40 CFM	60 CFM	80 CFM
Efficiency of core in winter				
Sensible	%	86.7	85.2	83.1
Latent	%	72.5	65.1	60.3
Efficiency of core in summer				
Sensible	%	71.1	69.4	68.1
Latent	%	56.2	54.5	51.2
Filter				
Indoor air	MERV	MERV 3 / optional MERV 13		
Outside air	MERV	MERV 13		
Leakage				
Internal		2.6% at 0.40"	2.4% at 0.40"	2.2% at 0.40"
External		2.8% at 1.0"	2.7% at 1.0"	2.5% at 1.0"

AIO VERTICAL STACK - 230V - 900W/1,800W ELECTRIC HEAT STRIP - R32 -SUBMITTAL (AVK10R3H2)

Job	Reference	Construction
Location	Approval	Quote Number
Engineer	Date	Drawing Number
Submitted To	Submitted By:	P.O. Number:



General Features

- BLDC inverter compressor
- ECM fans
- R410A Refrigerant
- Field configured 900W or 1,800W Electric heat supplement
- Auto restart
- Intelligent defrost
- No outdoor unit
- Condensate disbursement systems
- Onboard touch controller
- Integrated ERV
- Washable filter
- Compact, slim design
- 3 selectable fan speeds + Auto
- 10 Year limited warranty includes 1 year parts and labor and Additional 9
- Made in Italy

Performance Specifications

	900W	1,800W
Electric Heat		
Cooling Capacity (Btu/h)	15,000	15,000
SEER2	13.29	13.29
EER2	11.43	11.43
Rev. Cycle Max Heating Capacity (Btu/h)	15,000	15,000
Electric heat (BTU/h)	3,070	6,140
Total Heat Capacity w/ Elec (Btu/h)	18,070	21,140
HSPF2	8.86	8.86
Circulation (CFM)	226-400	226-400
Dehumidification (Pts/h)	1.9	1.9

1. EER2 and SEER2 are based on nominal capacity of 8,500 Btu/H
2. COP/ HSPF2 are based on nominal capacity of 9,000 Btu/h. COP/HSPF2 only take intro consideration the heat pump and not electric heat

Electric Specifications

	900W	1,800W
Power Supply (V Ph, Hz)	230/1/60	230/1/60
Voltage Range	190 - 251	190 - 251
Running Amps Cooling	7.8	7.8
Running Amps Heating	12.2	16.1
MCA	15	20
Maximum Overcurrent Protection (A)	25	30
Recommended breaker size	20	25
Max Power Input (watts) Cooling	1,800	1,800
Max Power Input (watts) Heating	2,700	3,600

Wall Controllers + Gateways

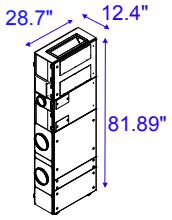
□ Wireless Remote	WRCH20
□ Basic Touch Controller	LTCH20
□ Recessed Touch Controller	RTCH20
□ Advanced TFT Controller with 7-Day program	TFTH20
□ Wireless (AA Battery) Infrared Controller with 7-Day program	WIPT20
□ Third Party Gateway	TPG015
□ Modbus	MODH20
□ WiFi App	WIFI30
□ E-Paper EOS Controller	EEOS12
□ Simple EOS Controller	SEOS12
□ BACnet	BACH20

ERV performance

General				
Flow type		Counterflow enthalpy exchanger		
Material		Mold and bacteria resistant, washable polymer membrane		
ASHRAE compliance		62.1 And 62.2 When used with the ERV module		
		40 CFM	**60 CFM**	**80 CFM**
Efficiency of core in winter				
Sensible	%	86.7	85.2	83.1
Latent	%	72.5	65.1	60.3
Efficiency of core in summer				
Sensible	%	71.1	69.4	68.1
Latent	%	56.2	54.5	51.2
Filter				
Indoor air	MERV	MERV 3 / optional MERV 13		
Outside air	MERV	MERV 13		
Leakage				
Internal		2.6% at 0.40"	2.4% at 0.40"	2.2% at 0.40"
External		2.8% at 1.0"	2.7% at 1.0"	2.5% at 1.0"

AIO VERTICAL STACK - 115V - 900W ELECTRIC HEAT - R32 -SUBMITTAL (AVK10R3H1)

Job	Reference	Construction
Location	Approval	Quote Number
Engineer	Date	Drawing Number
Submitted To	Submitted By:	P.O. Number:



General Features

- BLDC inverter compressor
- ECM fans
- R32 Refrigerant
- Field configured 900W Electric heat supplement
- Auto Restart
- Intelligent defrost
- No outdoor unit
- Condensate disbursement systems
- Onboard touch controller
- Integrated ERV
- Washable filter
- Compact, slim design
- 3 selectable fan speeds + Auto
- 10 Year limited warranty includes 1 year parts and labor and Additional 9
- Made in Italy

Performance Specifications

Cooling Capacity (Btu/h)	15,000
SEER2	13.29
EER2	11.43
Rev. Cycle Max Heating Capacity (Btu/h)	15,000
Electric heat (Btu/h)	3,070
Total Heat Capacity w/ Elec (Btu/h)	18,070
HSPF2	8.86
Circulation (CFM)	226-400
Dehumidification (Pts/h)	1.9

1. EER2 and SEER2 are based on nominal capacity of 8,500 Btu/H
2. COP/ HSPF2 are based on nominal capacity of 9,000 Btu/h. COP/HSPF2 only take intro consideration the heat pump and not electric heat

Electric Specifications

Power Supply (V Ph, Hz)	115/1/60
Voltage Range	98 - 120
Running Amps Cooling	15.7
Running Amps Heating	24.3
MCA	30
Maximum Overcurrent Protection (A)	40
Recommend breaker size	30
Max Power Input (watts) Cooling	1,800
Max Power Input (watts) Heating	2,700

Wall Controllers + Gateways

□ Wireless Remote	WRCH20
□ Basic Touch Controller	LTCH20
□ Recessed Touch Controller	RTCH20
□ Advanced TFT Controller with 7-Day program	TFTH20
□ Wireless (AA Battery) Infrared Controller with 7-Day program	WIPT20
□ Third Party Gateway	TPG015
□ Modbus	MODH20
□ WiFi App	WIFI30
□ E-Paper EOS Controller	EEOS12
□ Simple EOS Controller	SEOS12
□ BACnet	BACH20

ERV performance

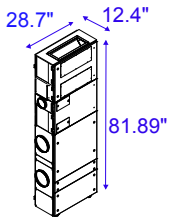
General

Flow type		Counterflow enthalpy exchanger
Material		Mold and bacteria resistant, washable polymer membrane
ASHRAE compliance		62.1 And 62.2 When used with the ERV module

		40 CFM	60 CFM	80 CFM
Efficiency of core in winter				
Sensible	%	86.7	85.2	83.1
Latent	%	72.5	65.1	60.3
Efficiency of core in summer				
Sensible	%	71.1	69.4	68.1
Latent	%	56.2	54.5	51.2
Filter				
Indoor air	MERV	MERV 3 / optional MERV 13		
Outside air	MERV	MERV 13		
Leakage				
Internal		2.6% at 0.40"	2.4% at 0.40"	2.2% at 0.40"
External		2.8% at 1.0"	2.7% at 1.0"	2.5% at 1.0"

AIO VERTICAL STACK -230V -NO ELECTRIC HEAT - R32 -SUBMITTAL (AVP10R3H2)

Job	Reference	Construction
Location	Approval	Quote Number
Engineer	Date	Drawing Number
Submitted To	Submitted By:	P.O. Number:



General Features

- BLDC inverter compressor
- ECM fans
- R32 Refrigerant
- Auto restart
- Intelligent defrost
- No outdoor unit
- Condensate disbursement systems
- Onboard touch controller
- Integrated ERV
- Washable filter
- Compact, slim design
- 3 selectable fan speeds + Auto
- 10 Year limited warranty includes 1 year parts and labor and Additional 9
- Made in Italy

Performance Specifications

Cooling Capacity (Btu/h)	15,000
SEER2	13.29
EER2	11.43
Rev. Cycle Max Heating Capacity (Btu/h)	15,000
Electric heat (Btu/h)	N/A
Total Heat Capacity w/ Elec (Btu/h)	15,000
HSPF2	8.86
Circulation (CFM)	226-400
Dehumidification (Pts/h)	1.9

1. EER2 and SEER2 are based on nominal capacity of 8,500 Btu/H
2. COP/ HSPF2 are based on nominal capacity of 9,000 Btu/h. COP/HSPF2 only take intro consideration the heat pump and not electric heat

Electric Specifications

Power Supply (V Ph, Hz)	230/1/60
Voltage Range	190 - 251
Running Amps Cooling	7.8
Max Amps Cooling	8.3
Running Amps Heating	10
Max Amps Heating	20
MCA	15
Maximum Overcurrent Protection (A)	1,800
Recommend breaker size	1,800
Max Power Input (watts) Cooling	1,800
Max Power Input (watts) Heating	2,700

Wall Controllers + Gateways

□ Wireless Remote	WRCH20
□ Basic Touch Controller	LTCH20
□ Recessed Touch Controller	RTCH20
□ Advanced TFT Controller with 7-Day program	TFTH20
□ Wireless (AA Battery) Infrared Controller with 7-Day program	WIPT20
□ Third Party Gateway	TPG015
□ Modbus	MODH20
□ WiFi App	WIFI30
□ E-Paper EOS Controller	EEOS12
□ Simple EOS Controller	SEOS12
□ BACnet	BACH20

ERV performance

General		
Flow type		Counterflow enthalpy exchanger
Material		Mold and bacteria resistant, washable polymer membrane
ASHRAE compliance		62.1 And 62.2 When used with the ERV module

		40 CFM	60 CFM	80 CFM
Efficiency of core in winter				
Sensible	%	86.7	85.2	83.1
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Efficiency of core in summer				
Sensible	%	71.1	69.4	68.1
Latent	%	56.2	54.5	51.2
Filter				
Indoor air	MERV	MERV 3 / optional MERV 13		
Outside air	MERV	MERV 13		
Leakage				
Internal		2.6% at 0.40"	2.4% at 0.40"	2.2% at 0.40"
External		2.8% at 1.0"	2.7% at 1.0"	2.5% at 1.0"

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