Product
Data Sheet

# Ceiling Ducted

List price $6,897 / $8,894 w/ERV

# CONTENTS



AIO Ceiling ducted can be discreetly installed above a ceiling and is ideal for single or multi-room applications. The return can be from the sides or the bottom for maximum flexibility. With up to 0.6" external static pressure, this unit can be used where ducting is required. Use with any interior grille and louver to provide additional design flexibility. A bathroom exhaust can connect to the dedicated stale air exhaust

**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 Ceiling Ducted is ideal for any room or area that requires between 4,000 and 10,500 BTU.
- **Integrated ERV**
  AIO Ceiling Ducted'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 Ceiling Ducted 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.
- **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 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.
- **Quiet**
  With whisper-quiet operation as low as 27 decibels, the occupant will barely notice AIO Ceiling Ducted is operating.
- **Intelligent defrosting**
  AIO's intelligent defrosting system means more time heating and less time on reverse cycle defrost.
- **Optional 1,800 Watt electric heat**
  The optional electric heating system operates alongside the heat pump when the latter lacks adequate power. This electric heating setup consists of two 900W heaters, strategically staged to optimize efficiency while minimizing the consumption of electric heat. The unit offers configuration options for electric heat usage: it can be set to use no electric heat, 900W electric heat, or 1,800W electric heat, providing flexibility and energy management capabilities.
- **No outside noise infiltration**
  AIO Ceiling Ducted 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 3/4 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 bottom of the unit without having to remove the unit from the ceiling.
- **Versatile controls**
  AIO includes an onboard 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 on-site 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.

- 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, single phase in 115V or 208/230V in accordance with the model specified
- Interior clearances as follows:
  - Sides of unit to wall: 1″
  - Bottom of unit to floor 1″
  - Top of unit to any obstruction: 3.5″
- Unblocked vents on the exterior and no obstacles within 36″.
- An internal drain is highly recommended.
- If using an externally run condensate line, note the following:
  - Must be properly insulated
  - Minimum of 30% slope
  - If on a low floor, ensure that end of drain is above the maximum height of snow buildup.
  - Highly recommended to use a heat trace wire on the drain line to prevent freezing. This can be connected to the a heat trace power connection on the bottom of the unit.
- Approved louvers installed with best practices to ensure no water into the wall assembly.
- 8″ diameter ducts through the wall which protrude 1/8″ into the unit's EPDM backing to ensure a tight seal.
- The unit must be perfectly level on the vertical and horizontal axis.
- The unit must be tight to the wall, with zero leakage between the external ducts and the unit. Use insulating material if wall is not level.
- Properly affixed wall bracket to wall studs or other supporting material. Note the wall bracket has several places that must be secured.

## Louver Specifications

AIO Ceiling Ducted 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 Ceiling ducted 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 0.34 sq feet for the intake vent and 0.34 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.

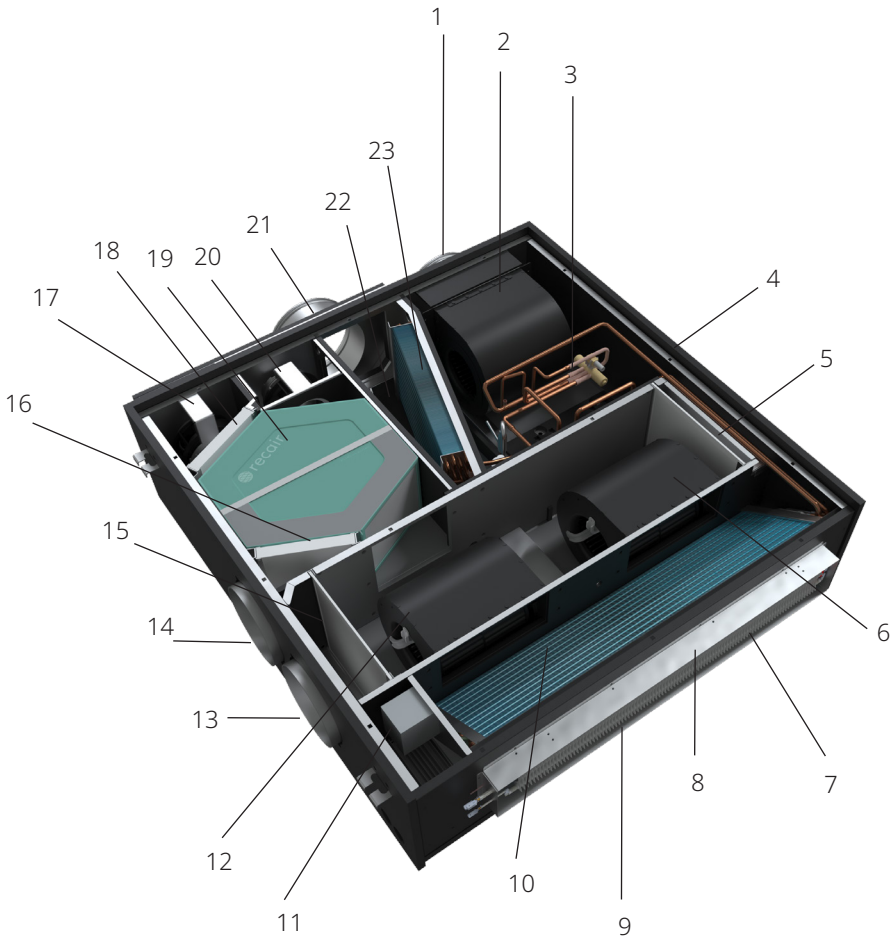
  **The maximum total pressure for the intake and exhaust ducting (if any) and intake and exhaust louvers combined must be under 0.7" WC**

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

# WHAT'S INSIDE

| | |
|---|---|
| **1.** | Condenser + stale air exhaust |
| **2.** | Condenser + stale air exhaust |
| **3.** | Twin rotary inverter compressor |
| **4.** | Return air connection |
| **5.** | Return air filter |
| **6.** | ECM supply fan |
| **7.** | 900/1880W electric heat strip |
| **8.** | Supply air connection |
| **9.** | Touch controller |
| **10.** | High-efficiency indoor coil |
| **11.** | Controllers |
| **12.** | EC supply fans |

| | |
|---|---|
| **13.** | Return air connection |
| **14.** | Internal stale air exhaust |
| **15.** | Return air filter |
| **16.** | MERV 13 filter |
| **17.** | Fresh air ECM supply fan |
| **18.** | MERV 13 filter |
| **19.** | Hybrid recovery core |
| **20.** | Stale air ECM exhaust fan |
| **21.** | Condenser + fresh air intake |
| **22.** | Condensate drain |
| **23.** | High efficiency outdoor coil |



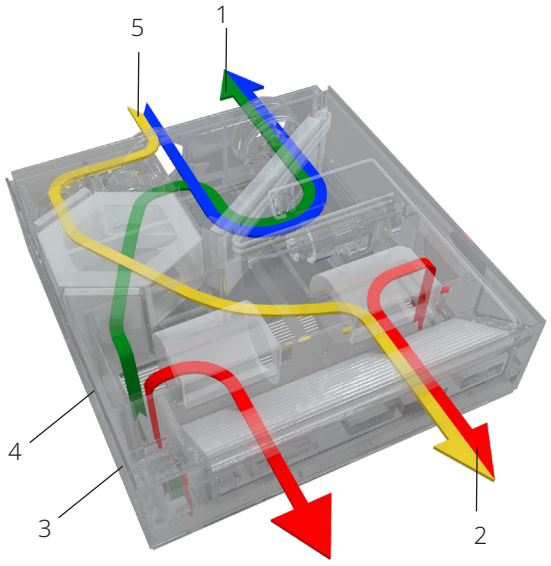
# AIRFLOW

AIO Ceiling Ducted is flexible in many ways. It can be fully ducted or used with minimal or no ducting. This flexibility enables AIO Ceiling Ducted to be placed anywhere in a dwelling without restrictions.

- **Supply air**
  The rectangular 4" x 29" supply air connection is ideal for a supply grille or ducting, with up to 0.6" external static pressure (combined between return and supply).
- **Stale air exhaust**
  The five-inch 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" external static pressure. If configuring AIO Ceiling Ducted with a bottom return, the stale air can also be pulled from the bottom return.
- **Return air - bottom option**
  The bottom 8.7" x 22" return is designed to be used with a ceiling-mounted return grille or an access panel with an integrated return grille.
- **Return air - sides options**
  The left and right side 6" round connection can be ducted to one or more rooms with up to 0.6" external static pressure (combined between return and supply). It can also be left open as a side plenum return. With two ECM fans, each with auto ESP, each connection is fully independent. 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 provides air for the condenser portion and fresh air for the inside. This can be ducted with up 0.7" external static pressure (combined between intake and exhaust).
- **Outside air exhaust**
  The single 8" round outside air exhaust connection is for the condenser portion and the stale air exhaust. This can be ducted with up 0.7" external static pressure (combined between intake and exhaust).

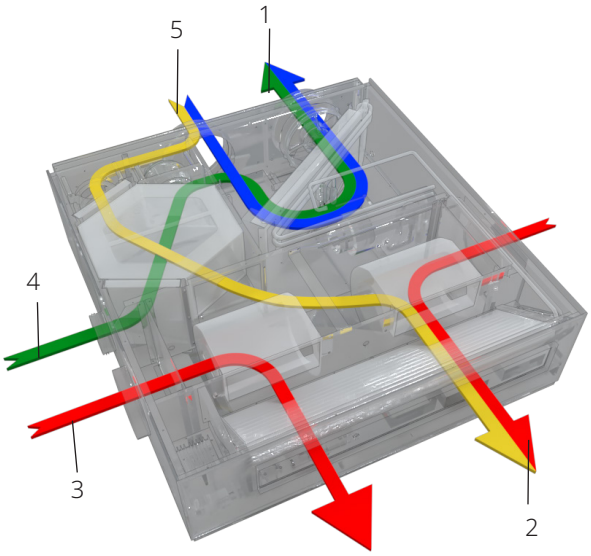
## Bottom Return

| | |
|---|---|
| **1.** | Exhaust air |
| **2.** | Supply air |
| **3.** | Return air |
| **4.** | Stale air |
| **5.** | Outside air |




## Side Return

| | |
|---|---|
| **1.** | Exhaust air |
| **2.** | Supply air |
| **3.** | Return air |
| **4.** | Stale air |
| **5.** | Outside air |

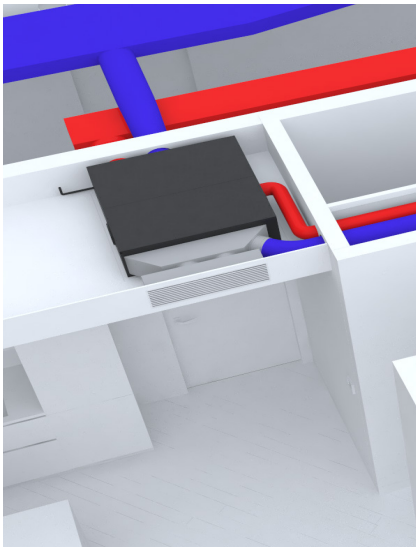



Air  Recirculate air

# INSTALLATION

**Direct existing window vent**

**Direct external vent**

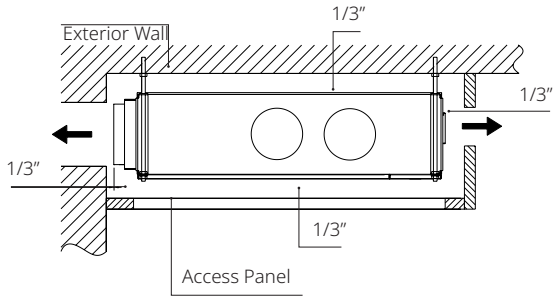


**Shared supply and exhaust vents**

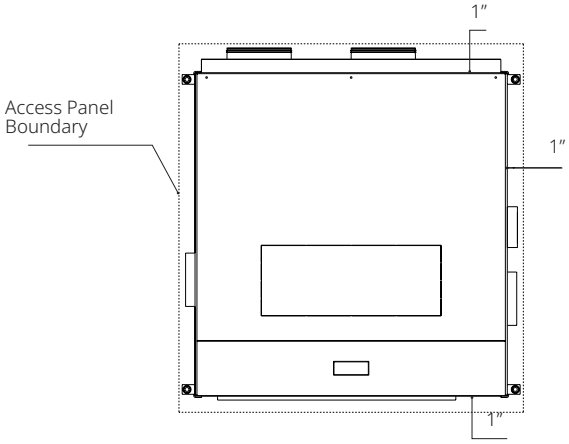
# CLEARANCE

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

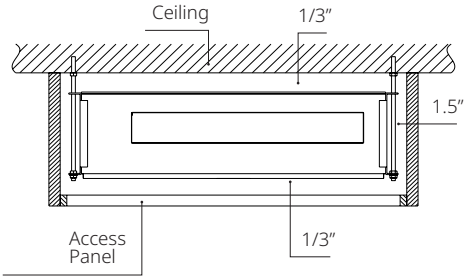
- **Ceiling**
  There must be 1/3" minimum clearance between the unit and ceiling to minimize noise from vibrations.
- **Bottom**
  There must be a minimum of 1/3" clearance between the unit and the false ceiling or access panel to minimize noise from vibrations.
- **Front**
  The clearance required in front of the unit to drywall or other material 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. Ensure sufficient clearance to attach ductwork to the rear vents.



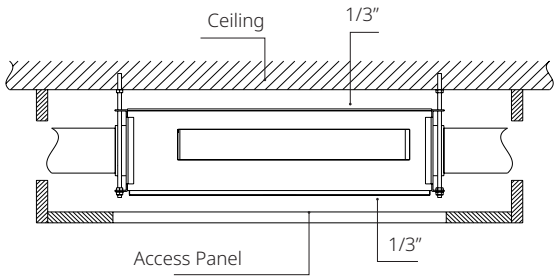

- **Access Panel**
  There must be an access panel of at least the size of the unit plus 1/2 inch all around. The recommended size is 39.5 x 41. The minimum size is 39 x 40.5. You can use a return grill as an access panel or an access panel with an integrated return grille.



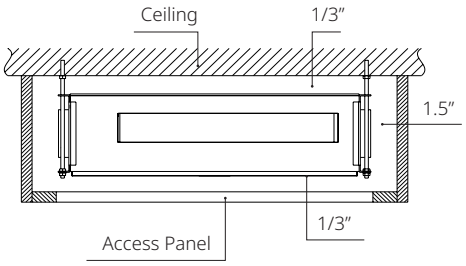

- **Sides**
  The clearance required on the sides is dependent on how the unit is configured for return and stale exhaust air. Minimum clearance between the unit and wall to minimize noise from vibrations. Ensure sufficient clearance to attach ductwork to the rear vents.
- **Bottom return configuration:**
  The only clearance required on the sides is 1.5". This is only necessary for the mounting brackets and to eliminate noise from vibrations. Larger clearance will make it will easier to mount and service the unit.




- **Side ducted return configuration**
  The clearance required is based solely on ductwork design. Ensure sufficient clearance to attach the ductwork to the side return.




- .**Side plenum return configuration**
  A minimum of 3.5" should be free for airflow on each side to allow the air to flow into the returns.




- **Exterior**
  On the exterior of the building, there should be no obstacles blocking the airflow from the louver. There must be at least 40" of free and clear space in front of the louvers.

# TECHNICAL SPECIFICATIONS

| Cooling | | 95°F[1] | 105°F[2] | 115°F[3] |
|---|---|---|---|---|
| **Heat Pump** | | | | |
| Maximum | | 15,000 | 8,800 | 8,000 |
| Nominal | Btu/h | 7,700 | 7,300 | 6,600 |
| Minimum | | 3,400 | 3,400 | 3,400 |
| Input Power | W | 729 | 820 | 910 |
| Efficiency | | 13.84 SEER2 | 8.9 EER2 | 7.25 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 | | 14,000 | 10,000 | 7,400 | 7,100 | 6,700 |
| Nominal | Btu/h | 8,600 | 8,300 | 6,200 | 5,900 | 5,600 |
| Minimum | | 3,500 | 3,000 | 2,700 | 2,700 | 2,700 |
| Input | W | 693 | 1,104 | 1,081 | 1,054 | 1,019 |
| Efficiency | | 9.12 HSPF2 | 2.2 COP2 | 1.68 COP2 | 1.64 COP2 | 1.61 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 | 226 - 400 |
| | Available ESP | 0.6" WC |
| | Supply connection | 3.9" H x 29.1" W |
| | Return connection | Two 6" round on sides or bottom 8.7" x 22.1" |
| | Speeds | Low, med, high, boost, auto |
| | Filter | MERV 3 |
| Outdoor | Type | ECM centrifugal |
| | CFM | 385 - 638 |
| | 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 45.7" D x 11" H |
| Weight | Net | 170 lb |
| | Gross | 190 lb |
| Cabinet | Finish | Black covered with dark gray EPDM |
| | 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 |

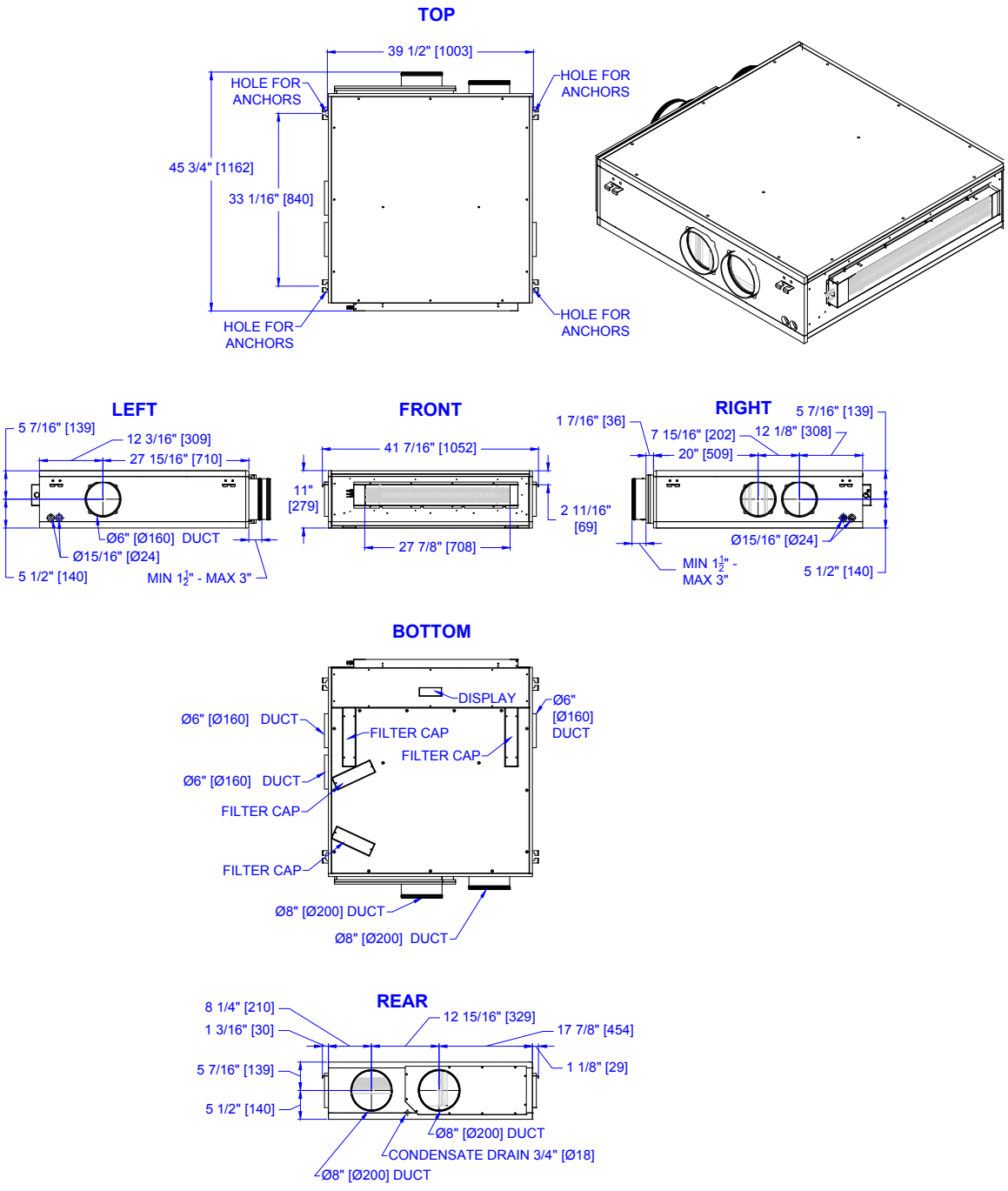
| | | | 115V | 230V |
|---|---|---|---|---|
| **Circuit breakers** | | | | |
| Heat Pump Only | MCA | A | 20 | 10 |
| | Recommended breaker size | A | 20 | 15 |
| | MOCP | A | 35 | 20 |
| Heat Pump + 900 W Elec Heat | MCA | A | 30 | 15 |
| | Recommended breaker size | A | 30 | 20 |
| | MOCP | A | 40 | 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 | N/A* | 6-15P |
| Heat Pump + 1,800 W Elec Heat | Amps | N/A* | 20 |
| | Plug Type | N/A* | 6-20P |

*LDCI cord not available in 115V above 20A

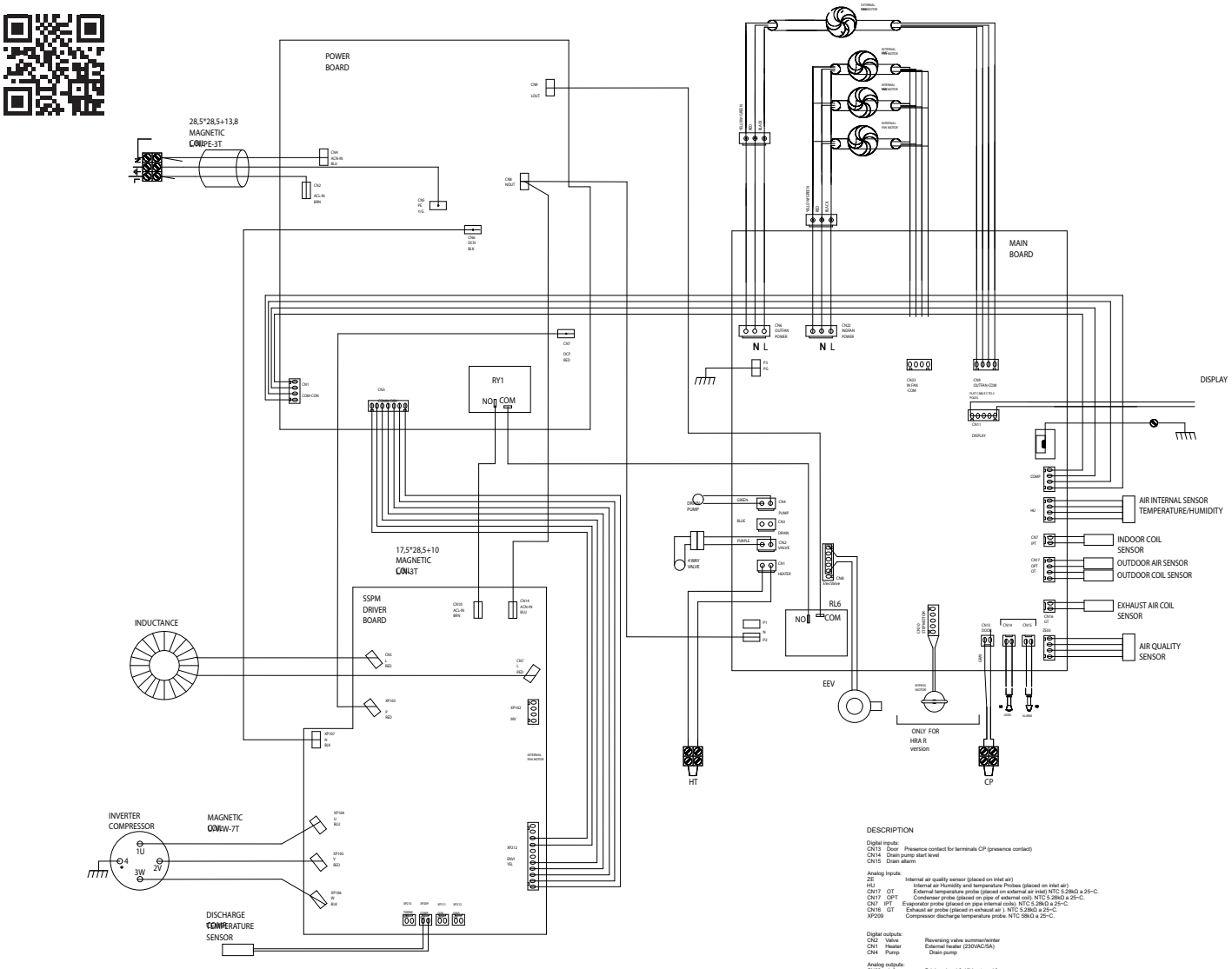
# DIMENSIONS

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



# WIRING DIAGRAM

## Heat pump only




DESCRIPTION

Digital inputs:
CN13 Door Presence contact for terminals CP (presence contact)
CN14 Drain pump start level
CN15 Drain allarm

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.
AP200 Compressor discharge temperature probe. NTC 58kΩ a 25~C.

Digital outputs:
CN2 Valve Reversing valve summer/winter
CN1 Heater External heater (230VAC/5A)
CN4 Pump Drain pump

Analog outputs:
CN23 Infan Driving signal 0-10V external fan
CN9 Outfan_con Driving signal 0-10V external fan
CN10 StepMotor Driving step motor for damper
CN10 StepMotor Driving step motor for damper

CN11 Display Display touch connection

## Notes

### DESCRIPTION

| | | |
|---|---|---|
| **Digital inputs:** | | |
| CN13 | Door | Presence contact for terminals CP (presence contact) |
| CN14 | | Drain pump start level |
| CN15 | | Drain alarm |
| **Analogue 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 |
| CN1 | Heater | External heater (230VAC/5A) |
| CN4 | Pump | Drain pump |
| **Outputs:** | | |
| CN23 | In fan | Driving signal 0-10V external fan |
| CN9 | Out fan con | Driving signal 0-10V external fan |
| CN19 | Step Motor | Driving step motor for damper |
| CN10 | Step Motor | Driving step motor for damper |
| 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:

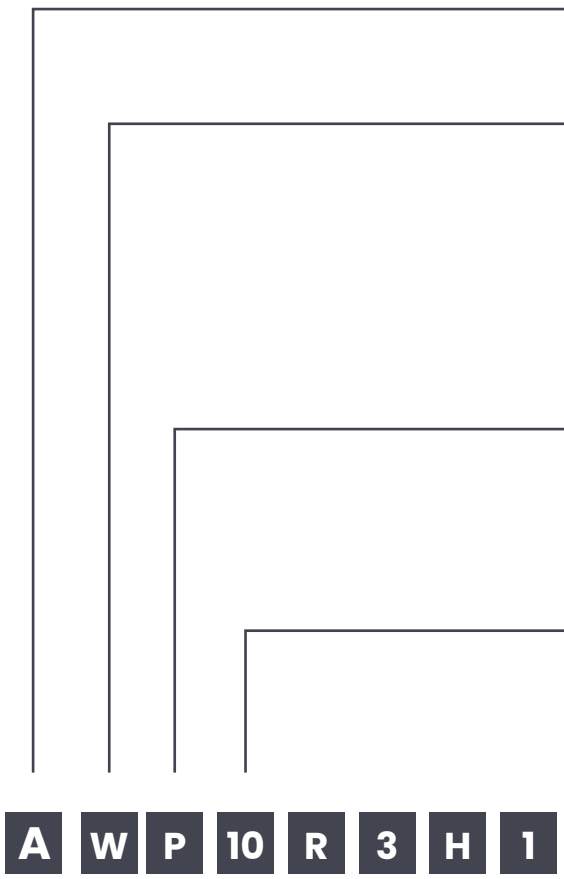
- The unit must be in alignment with the intended room's design specification
- Submit documented filter cleaning every two months.
- Submit documented annual unit cleaning.
- Maintain attic stock of at least 3%, with a minimum of 5 units.
- Labor warranty applies only to orders of 10 units or more.
- 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.

# NOMENCLATURE




**Family**

A = AIO

**Model**

P = Wall Mounted Pro

W = Wall Mounted

D = Ceiling Ducted

S = Ceiling Suspended

V = Vertical Stack ( including XL )

**Version**

P = Heat Pump Only

K = Heat pump +900w/ 1,800w*

M = Heat pump +3,600w

**Capacity**

10 = Design of 10,500 Btu/h

20 = Design of 21,000 Btu/h

**Voltage**

1 = 115V

2 = 230V

**Available Power Connection Accessories**

- LCDI Power Cord (up to 20 Amp)
- Quick Connect Whip

**Refrigerant**

3 = R32

**Integrated ERV**

R = With ERV

N = Without ERV

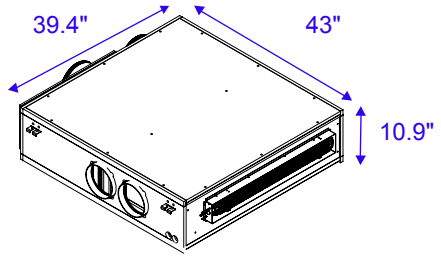
* Field convertible

# AIO CEILING DUCTED - 115V - NO ELECTRIC HEAT STRIP - R32 -SUBMITTAL (ADP10N3H1)

| | | |
|---|---|---|
| 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
- Integrated ERV
- Bathroom exhaust connection
- MERV 13 filters on fresh air
- R32 Refrigerant
- Auto restart
- Intelligent defrost
- No outdoor unit
- Onboard touch controller
- Washable filters
- 3 selectable fan speeds + Auto
- 10 Year limited warranty includes 1 year parts and labor and Additional 9 years on parts
- Made in Italy




## Performance Specifications

| | |
|---|---|
| Cooling Capacity (Btu/h) | 14,000 |
| SEER2 | 12.89 |
| EER2 | 11..20 |
| Rev. Cycle Max Heating Capacity (Btu/h) | 14,000 |
| Electric heat (BTU/h) | N/A |
| Total Heat Capacity w/ Elec (Btu/h) | 14,000 |
| HSPF2 | 8.64 |
| Circulation (CFM) | 226-400 |
| Dehumidification (Pts/h) | 1.9 |

1. EER2 and SEER2 are based on nominal capacity of 7,400 Btu/H
2. COP/ HSPF2 are based on nominal capacity of 8,200 Btu/h. COP/HSPF2 only take intro consideration the heat pump and not electric heat

## Electric Specifications

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

## Wall Controllers + Gateways

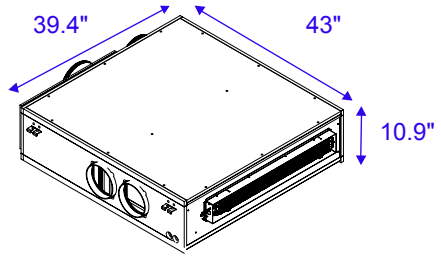
| | |
|---|---|
| □ Wireless Remote | WRCH20 |
| □ Basic Touch Controller | LTCH20 |
| □ Recessed Touch Controller | RTCH20 |
| □ Advanced TFT Controller with 7-Day program | TFTH20 |
| □ Wireless (AA Battery) Infrared Controller with 7-Day program | WIPT20 |
| □ Third Party Gateway | TPG015 |
| □ Modbus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

# AIO CEILING DUCTED - 115V - 900W ELECTRIC HEAT - R32 -SUBMITTAL (ADE10N3H1)

| | | |
|---|---|---|
| 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
- 900W Electric heat supplement
- Integrated ERV
- Bathroom exhaust connection
- MERV 13 filters on fresh air
- R410A Refrigerant
- Auto restart
- Intelligent defrost
- No outdoor unit
- Onboard touch controller
- Washable filters
- 3 selectable fan speeds + Auto
- 10 Year limited warranty includes 1 year parts and labor and Additional 9 years on parts
- Made in Italy




## Performance Specifications

| | |
|---|---|
| Cooling Capacity (Btu/h) | 14,000 |
| SEER2 | 12.89 |
| EER2 | 11..20 |
| Rev. Cycle Max Heating Capacity (Btu/h) | 14,000 |
| Electric heat (BTU/h) | 3,070 |
| Total Heat Capacity w/ Elec (Btu/h) | 17,070 |
| HSPF2 | 8.64 |
| Circulation (CFM) | 226-400 |
| Dehumidification (Pts/h) | 1.9 |

1. EER2 and SEER2 are based on nominal capacity of 7,400 Btu/H
2. COP/ HSPF2 are based on nominal capacity of 8,200 Btu/h. COP/HSPF2 only take intro consideration the heat pump and not electric heat

## Electric Specifications

| Electric Heat | |
|---|---|
| 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 |
| Recommended breaker size | 30 |
| Max Power Input (watts) Cooling | 1,800 |
| Max Power Input (watts) Heating | 2,700 |

## Wall Controllers + Gateways

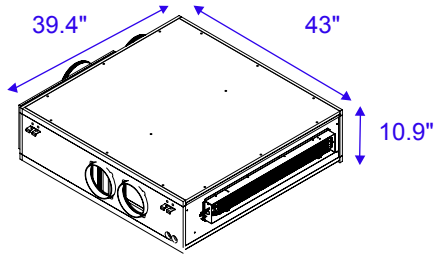
| | |
|---|---|
| □ Wireless Remote | WRCH20 |
| □ Basic Touch Controller | LTCH20 |
| □ Recessed Touch Controller | RTCH20 |
| □ Advanced TFT Controller with 7-Day program | TFTH20 |
| □ Wireless (AA Battery) Infrared Controller with 7-Day program | WIPT20 |
| □ Third Party Gateway | TPG015 |
| □ Modbus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

# AIO CEILING DUCTED - 230V - NO ELECTRIC HEAT STRIP - R32 -SUBMITTAL (ADP10R3H2)

| | | |
|---|---|---|
| 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
- Integrated ERV
- Bathroom exhaust connection
- MERV 13 filters on fresh air
- R410A R32 Refrigerant
- Auto restart
- Intelligent defrost
- No outdoor unit
- Onboard touch controller
- Washable filters
- 3 selectable fan speeds + Auto
- 10 Year limited warranty includes 1 year parts and labor and Additional 9 years on parts
- Made in Italy




## Performance Specifications

| | |
|---|---|
| Cooling Capacity (Btu/h) | 14,000 |
| SEER2 | 12.89 |
| EER2 | 11..20 |
| Rev. Cycle Max Heating Capacity (Btu/h) | 14,000 |
| Electric heat (BTU/h) | N/A |
| Total Heat Capacity w/ Elec (Btu/h) | 14,000 |
| HSPF2 | 8.64 |
| Circulation (CFM) | 226-400 |
| Dehumidification (Pts/h) | 1.9 |

1. EER2 and SEER2 are based on nominal capacity of 7,400 Btu/H
2. COP/ HSPF2 are based on nominal capacity of 8,200 Btu/h. COP/HSPF2 only take intro consideration the heat pump and not electric heat

## Electric Specifications

| Electric Heat | |
|---|---|
| Power Supply (V Ph, Hz) | 230/1/60 |
| Voltage Range | 207-251 |
| Running Amps Cooling | 7.8 |
| Running Amps Heating | 8.3 |
| MCA | 10 |
| Maximum Overcurrent Protection (A) | 20 |
| Recommended breaker size | 15 |
| Max Power Input (watts) Cooling | 1,800 |
| Max Power Input (watts) Heating | 1,800 |

## Wall Controllers + Gateways

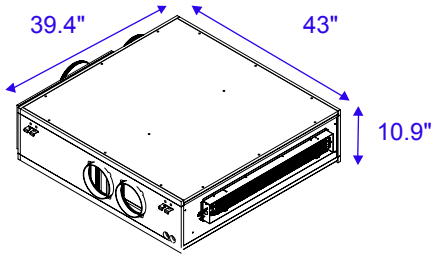
| | |
|---|---|
| □ Wireless Remote | WRCH20 |
| □ Basic Touch Controller | LTCH20 |
| □ Recessed Touch Controller | RTCH20 |
| □ Advanced TFT Controller with 7-Day program | TFTH20 |
| □ Wireless (AA Battery) Infrared Controller with 7-Day program | WIPT20 |
| □ Third Party Gateway | TPG015 |
| □ Modbus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

# AIO CEILING DUCTED - 115V - 115V - 900W/1,800W ELEC. HEAT - R32 -SUBMITTAL (ADK10R3H2)

| | | |
|---|---|---|
| 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
- Field configured 900W or 1,800W Electric heat supplement
- Integrated ERV
- Bathroom exhaust connection
- MERV 13 filters on fresh air
- R32 Refrigerant
- Auto restart
- Intelligent defrost
- No outdoor unit
- Onboard touch controller
- Washable filters
- 3 selectable fan speeds + Auto
- 10 Year limited warranty includes 1 year parts and labor and Additional 9 years on parts
- Made in Italy




## Performance Specifications

| | 900W | 1,800W |
|---|---|---|
| **Electric Heat** | | |
| Cooling Capacity (Btu/h) | 14,000 | 14,000 |
| SEER2 | 12.89 | 12.89 |
| EER2 | 11..20 | 11..20 |
| Rev. Cycle Max Heating Capacity (Btu/h) | 14,000 | 14,000 |
| Electric heat (BTU/h) | 3,070 | 6,140 |
| Total Heat Capacity w/ Elec (Btu/h) | 17,070 | 20,140 |
| HSPF2 | 8.64 | 8.64 |
| Circulation (CFM) | 226-400 | 226-400 |
| Dehumidification (Pts/h) | 1.9 | 1.9 |

1. EER2 and SEER2 are based on nominal capacity of 7,400 Btu/H
2. COP/ HSPF2 are based on nominal capacity of 8,200 Btu/h. COP/HSPF2 only take intro consideration the heat pump and not electric heat

## 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 |

## Electric Specifications

| | 900W |
|---|---|
| Power Supply (V Ph, Hz) | 230/1/60 |
| Voltage Range | 207-251 |
| Running Amps Cooling | 7.8 |
| Running Amps Heating | 12.2 |
| MCA | 15 |
| Maximum Overcurrent Protection (A) | 25 |
| Recommended breaker size | 20 |
| Max Power Input (watts) Cooling | 1,800 |
| Max Power Input (watts) Heating | 2,700 |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