# AIO™ Vertical Stack without ERV (Gen 3)

Product Data Sheet

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## CERTIFICATIONS & LISTINGS

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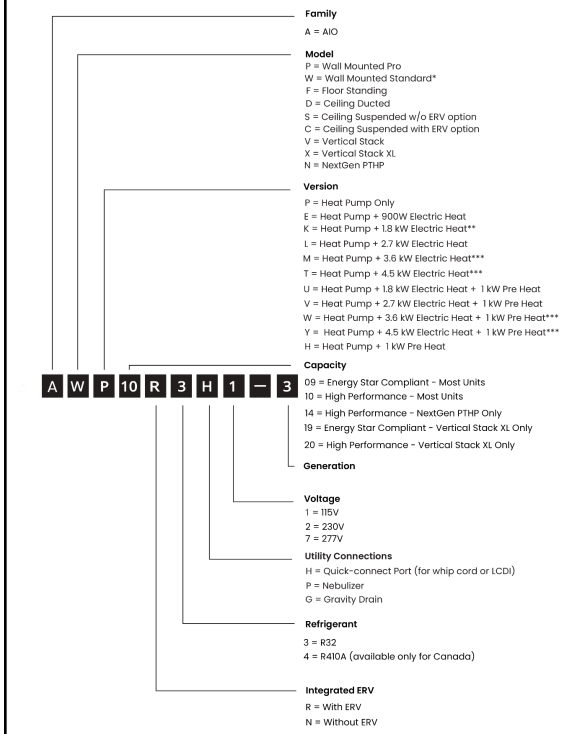
ETL Listed. Control Number: 5032306. Conforms to: UL 60335-2-40:2022 Ed.4 | CSA C22.2#60335-2-40:2022 Ed.4 | UL 60335-1:2016 Ed.6 | CSA C22.2#60335-1:2016 Ed.2

## MODEL NUMBER NOMENCLATURE

The code identifies the family, model, version, size, voltage, accessories, refrigerant type, and ERV option. See the diagram below for details.

*Figure 1. AIO™ Model Number Nomenclature*




* 8" Vents : Just generation (e.g. = 3)
6" Vents : Generation + SP (e.g. = 3SP)
** Field convertible to 900W
*** AIO™ Vertical Stack XL **Only**

# CONTENTS

# 1. READING THIS DOCUMENTATION

Some language and symbols in this documentation have specific meanings.

## 1.1 Documentation-specific language

**Reference to the product**
Any reference to "the unit" refers to the AIO™ Vertical Stack without an ERV unit.

**Unit orientation**
All directions in this guide (left, right, top, bottom) are given from the perspective of facing the unit.

## 1.2 Annotation icons

Annotations are provided throughout this guide. It is essential to read each carefully and follow the instructions stated.

Indicates critical information for correct operation or installation.

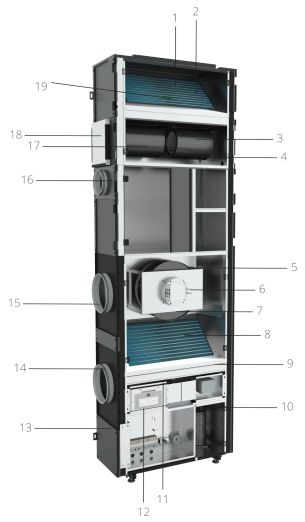
Indicates supplemental information, tips, or useful background information.

# 2. AIO™ VERTICAL STACK - WITHOUT ERV OVERVIEW

AIO™ Vertical Stack is the ideal multi-room solution when a ceiling-mounted unit is not desired or feasible. The compact 12.4-inch (315 mm) by 27.4-inch (695 mm) footprint uses minimal floor space. This unit is perfect anywhere direct venting or ducting is required, with up to 0.6" (15.2 mm) external static pressure. Use any grille and louvers for maximum design flexibility.

## 2.1 Components and structure

*Figure 2. AIO™ Vertical Stack without ERV components and structure*




| | | | |
|---|---|---|---|
| **1** | Top supply air vent | **11** | Electrical controls |
| **2** | Front supply air vent | **12** | Touch Controller |
| **3** | ECM supply fan | **13** | Condensate drain |
| **4** | Return vent | **14** | Condenser exhaust |
| **5** | Condenser intake | **15** | Condenser intake |
| **6** | ECM condenser fan | **16** | Side Exhaust (not used in this unit) |
| **7** | Condensate Mister System | **17** | ECM supply fan |
| **8** | High efficiency outdoor heat exchanger | **18** | Return vent |
| **9** | Condenser exhaust | **19** | High-efficiency indoor heat exchanger |
| **10** | Twin rotary inverter compressor | | |

## 2.2 Key Features

**No outdoor unit**
The single package design means that there is 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 Brushless DC (BLDC) inverter compressor operates efficiently, quietly, and with minimal vibration. AIO™'s Vertical Stack unit is ideal for any room or area that requires between 3,900 and 14,400 BtU/hr.

**Recovery plus™**
With a patent-pending innovation, the AIO™ unit utilizes the hot or cold air passing through the recovery core to lower or raise the temperature of the condenser, boosting 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 the need for a dedicated exhaust system. The bathroom exhaust can be field swapped to the 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 or home is clean and safe.

**High-efficiency ECM fans with auto ESP**
High-efficiency electronically commutated motor (ECM) fans enable efficient and quiet operation because the EC motor can ramp up or down as required. Automatically adjusted external static pressure (ESP) ensures correct airflow.

**Cold climate heat pump**
The heat pump functions efficiently in temperatures as low as 5°F (-15°C) outdoors and continues to operate at colder temperatures, even below -5°F (-20.6°C).

**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 the reverse cycle defrost.

**Coil cooling system**
The condensate mist 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 that the AIO™ Vertical Stack is operating.

**Versatile on/off options**
AIO™'s low-voltage connection enables connection to any Building Management System (BMS), key-card system, window sensors, fire alarms, etc. As long as a system can send a signal to the AIO™ unit via low voltage, the unit can be easily turned on or off.

**Minimal clearances and compact footprint**
AIO™'s compact form does not use any line sets. This means that there is no need to access the sides of the unit. You can mount units with as little as 2.0" (50.8 mm) clearance on all sides.

**Leak protection**
If a drain becomes clogged, the system shuts down, and an alarm is activated. This prevents water damage.

**Easy to service**
The AIO™ unit can be easily maintained and repaired from the front or bottom of the unit without having to remove the unit from the wall. An AIO™ unit can also be quickly swapped with a replacement, reducing downtime.

**Versatile controls**
The AIO™ unit includes an onboard touch controller and an optional iOS and Android app. AIO™ can be used with optional wall-mounted controllers, including a Thin Film Transistor (TFT) with a 7-day program, and third-party controllers from any company, using the optional third-party kit. An optional BACnet and Modbus module enables interfacing with building management systems.

# 3. AIRFLOW

## 3.1 Airflow Operation

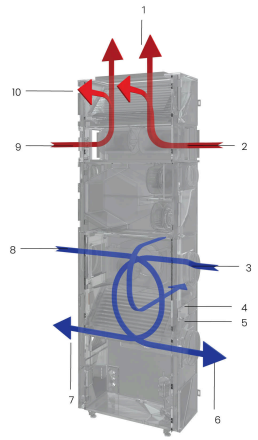
The AIO™ Vertical Stack unit provides a high degree of flexibility. It can be fully ducted or used with minimal or no ducting. This enables the AIO™ Vertical Stack to be placed anywhere in a dwelling, with no restrictions.

- **Supply air**
  The front, rectangular 7.3" (186 mm) x 20.4" (517 mm) supply air connection is ideal for a supply grille. With 0.6" WC (149.5 Pa) external static pressure (combined between return and supply), the top rectangular 6.5" (164 mm) x 19.5" (495 mm) supply air connection is ideal for ducting to one or more rooms. For added flexibility, it is possible to duct part of the airflow through the top and direct-vent the remainder through the front for ducting multiple rooms with minimal ductwork.
- **Return air**
  The left and right side 6" (160 mm) round connection can be ducted to one or more rooms with up to 0.6" WC (149.5 Pa) 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.

  For optimal performance, a fully ducted return configuration is recommended. Both return air openings must remain open and unobstructed during operation. The unit may be installed with both returns ducted, or with one return ducted and the other left open as a side plenum return.
- **Outside air intake**
  The single 8" (200 mm) 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 to 0.7" WC (174.4 Pa) external static pressure (combined between intake and exhaust).
- **Outside air exhaust**
  The single 8" (200 mm) 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 to 0.7" WC (174.4 Pa) 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 is 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.

## 3.2 Airflow Diagram

*Figure 3.*

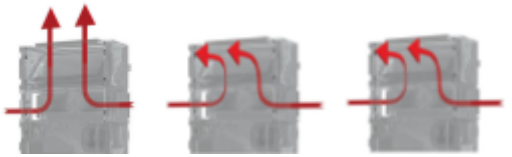



■ Outside air ■ Recirculate air

| | | | |
|---|---|---|---|
| **1** | Top supply | **6** | Side exhaust |
| **2** | Return | **7** | Side exhaust |
| **3** | Side intake | **8** | Side intake |
| **4** | Rear intake | **9** | Return |
| **5** | Rear exhaust | **10** | Front supply |

## 3.3 Fan Coil Part

*Figure 4. Fan Coil Part*



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

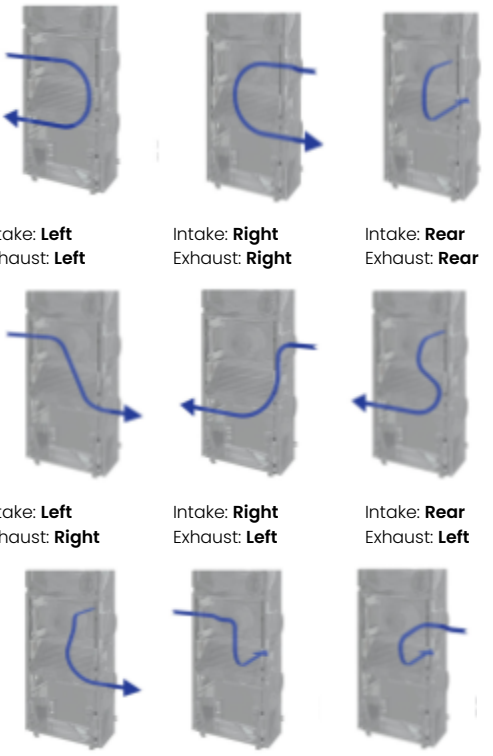
Supply: **Top**
Return: **Left & Right**

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

■ Recirculate air

## 3.4 Condenser Part

*Figure 5. 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

## 3.5 Fan curves

The following graphs illustrate airflow versus external static pressure at low, medium, and high fan speeds.

*Figure 6. Indoor fan performance curves*

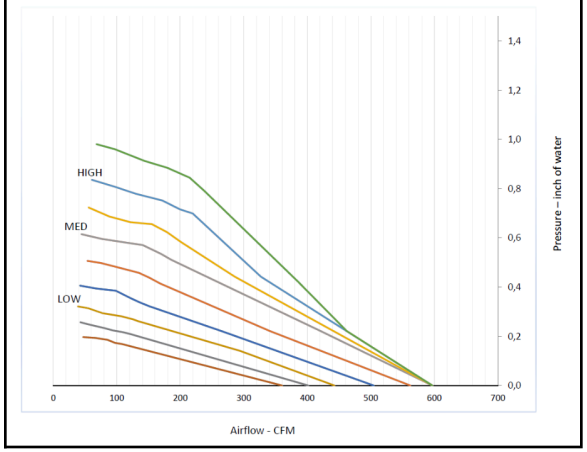



*Figure 7. Lateral outdoor fan performance curves*

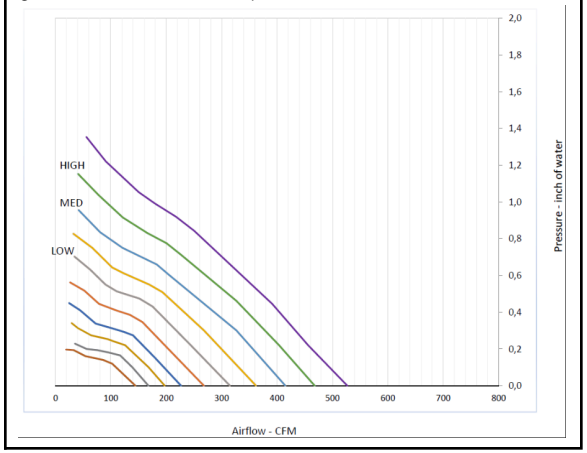
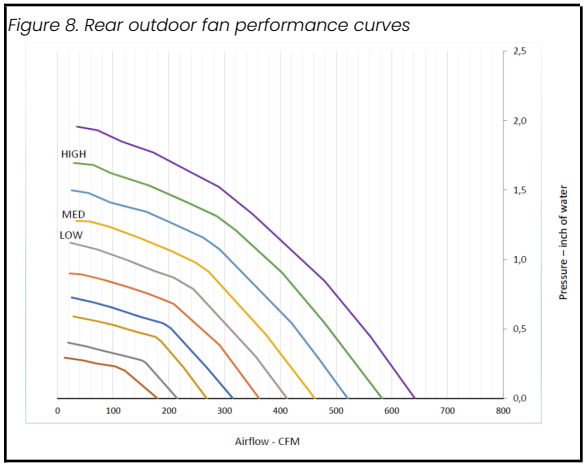



*Figure 8. Rear outdoor fan performance curves*




# 4. INSTALLATION REQUIREMENTS

*Figure 9. Installation*

Shared supply and exhaust vents | Right external vent | Left external vent

## 4.1 Air Balancing Requirements

- All units must be properly air balanced by a qualified, professional air balancing company.
- Air balancing must be performed after installation and prior to final commissioning.
- A formal air balancing report must be completed and made available.
- Failure to perform air balancing properly may result in improper performance, system issues, and voiding of the warranty.

## 4.2 Startup airflow commissioning

Startup airflow commissioning is required. Select the indoor/outdoor airflow program to match the installed duct configuration and external static pressure, then complete field air balancing before final commissioning. See the Installation Guide for detailed setup procedures.

## 4.3 Low Ambient Heating Configuration Requirement

To configure the unit for electric resistance heating in low ambient conditions:

1. Turn on the unit.
2. Press and hold ☼ for 10 seconds until "Fh" appears on the display.
3. Press and hold ☼ for 5-10 seconds until "Fo" appears on the display.
4. Press and hold ☼ for 5-10 seconds until "rE" appears on the display.
5. Wait a few seconds (without pressing any buttons) to exit the menu.

rE = Resistance heat mode

This setting switches the unit to electric resistance heating during low ambient conditions, preventing heat pump operation that may contribute to ice formation.

## 4.4 Ambient Temperature Protection

When installed in climates with ambient temperatures below freezing, the unit must be located in an enclosed, temperature-protected indoor space that will not fall below 5°F (-15°C).

Secure any installation site insulation so that it cannot detach or be drawn into the unit's air openings.
Failure to secure insulation may lead to unit damage and will void the warranty.

## 4.5 Site Requirements

Refer to the installation manual for complete installation requirements and specifications.

- Where practical, avoid installing the unit in a location exposed to direct sunlight. Solar heating may cause the room-air temperature sensor to detect a temperature higher than the actual room temperature, resulting in improper temperature control, unnecessary cooling operation, reduced heating output, and decreased energy efficiency.
- An electrical supply with a grounded 3-prong receptacle.
- A power supply circuit installed in accordance with the current edition of NEC (ANSI/NFPA 70) and local codes and ordinances.

- Always consult local and national electrical codes before installing the unit.
- Damage or premature failure of the quoted equipment resulting from improper voltage conditions, inadequate electrical service, or operating the equipment with excessive THD (Total Harmonic Distortion) levels will void the Manufacturer's warranty.

- Do not operate the unit in or near a construction or renovation site. Dust and debris can enter the unit, causing malfunctions and reduced performance.
- If the unit must be operated during construction or renovation, the air filters and accessible coil surfaces must be inspected and cleaned daily before operation.
- Failure to perform daily cleaning during construction use may result in damage and will void the warranty.

- A power supply with a voltage rating of 60 Hz, single phase, in 115V or 208V/230V/240V in accordance with the model specified.
- All responsible parties must verify that the electrical supply is properly grounded, free of excessive electrical noise, and within the specified voltage and frequency limits before energizing the unit. Failure to correct power quality issues, including voltage instability or electrical noise, may result in equipment damage and will void the warranty for affected components.
- A properly installed condensate drain line. An internal condensate drain line is highly recommended.
- If using an externally run condensate line, note the following:
  - The line must be properly insulated.
  - The line must have a minimum slope of 2%.
  - If on a low floor, ensure that the end of the drain is above the maximum height of snow buildup.
- The factory-installed condensate drain is a ⅝" flexible drain pipe. To extend the drain line, insert the flexible pipe into a larger ¾" PVC or equivalent plumbing pipe and secure it using an external clamp or approved method. Do not use internal couplings or barbed fittings that reduce the internal diameter of the drain line, as this may restrict flow and lead to drainage issues.
- Interior clearances are only required to prevent vibrations. Leave at least 2" (50.8 mm) of clearance from any surface. All other clearances are dependent on ducting.
- Approved louvers must be installed with best practices to ensure that no water enters the wall assembly.
- The unit is intended for ducted installation. Installation without ductwork may result in airflow performance issues.

- 8" (203.2 mm) diameter ducts through the wall, which protrude 1/8" (3.2 mm) into the unit's ePDM backing to ensure a tight seal.
- The unit must be perfectly level on the horizontal axis and perfectly plumb on the vertical axis.
- The unit must be attached to the ducts tightly, with zero leakage between the external ducts and the unit. If the wall is not plumb, use insulating material.
- The unit must be properly affixed with screws to wall studs or other supporting material.
- Unblocked vents on the exterior and no obstacles within 36" (914.4 mm).
- An access panel with adequate clearance to the entire front of the unit for servicing.
- The outside air intake duct is intended to be installed as insulated ducting (with a minimum of R-8 insulation). Insulation reduces thermal losses during cooling operation and helps prevent freezing and condensation during heating operation, which may result in equipment or property damage.
- Vertical Stack units are intended to be installed within an insulated closet that is thermally coupled to the conditioned space. Insulating the closet helps prevent exposure to extreme outdoor temperatures and limits temperature stratification, ensuring the unit reflects indoor conditions and reducing the risk of inaccurate temperature readings during both heating and cooling operations.
- The outside air intake duct is intended to be installed as insulated ducting (with a minimum of R-8 insulation). Insulation reduces thermal losses during cooling operation and helps prevent freezing and condensation during heating operation, which may result in equipment or property damage.
- INNOVA provides a mounting template to facilitate the installation process.

## 4.6 Louver Specifications

AIO™ Vertical Stack units can be vented using custom and creative solutions. The possibilities are endless, from perforated panels to custom louvers.

There are three critical factors when selecting and sizing a solution that works with AIO™ Vertical Stack units:

- **Air-path separation:** When a field-supplied louver or louver assembly serves both the outdoor-air intake and exhaust, provide a continuous, airtight, insulated separator between the intake and exhaust air paths. The separator must extend through the plenum to the exterior louver to prevent exhaust air from being drawn back into the intake. Exhaust-air recirculation can cause improper operation and unit short cycling.
- **Free area:** The area on a louver/grille that is open for the air to flow through. The louver, perforated panel, or other solution must have at least the amount of free area specified 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 square feet (0.03 $m^2$) for the intake vent and 0.34 square feet (0.03 $m^2$) 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 (174.4 Pa).
- 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 (174.4 Pa).

Any louver or louver assembly must meet these requirements, because exceeding these limits can cause the unit to overheat and fail. This will void the warranty.

The following louvers are approved for AIO™ Vertical Stack units:

- **Sunvent:** LLA/C, LLA/M, LLA/s - available through your INNOVA distributor.
- **Thermaduct:** RLA8 - available through your INNOVA distributor.

## 4.7 Clearance requirements

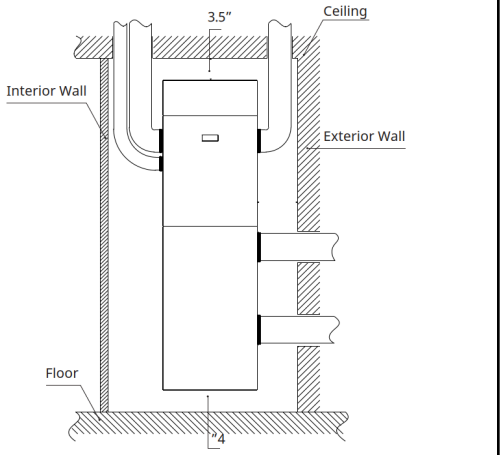
The AIO™ Vertical Stack unit's clearance will depend on how it is vented. Carefully read the criteria below to determine the correct clearance required.

- **Ceiling**
  There must be a 2" (50.8 mm) minimum clearance between the unit and the 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 2" (50.8 mm) clearance between the unit and the floor to minimize noise from vibrations. The unit sits on adjustable leveling legs, which can be removed to hang the unit on the wall.
- **Access Panel**
  There must be an access panel of at least the size of the unit plus 2" (50 mm) all around. The recommended size is 88" (2235 mm) x 32" (813

mm). The minimum size is 86.4" (2195 mm) x 30.7" (779 mm). You can integrate a return and supply grille into the access panel door.

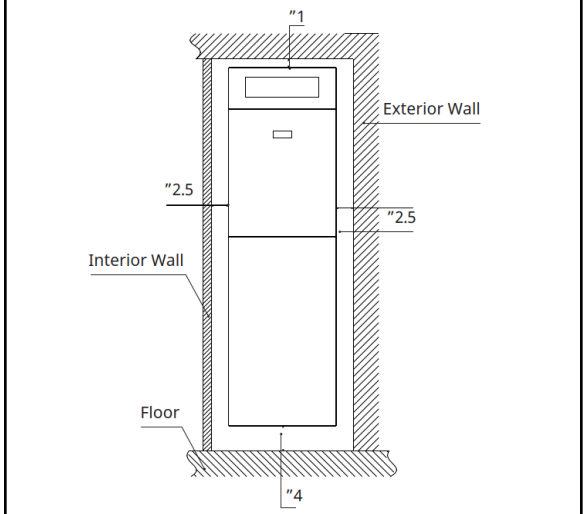
- **Sides**
  The clearance required on the sides is dependent on how the unit is configured for return and stale exhaust air.
- **Side ducted return configuration**
  The clearance required is based solely on ductwork design. Ensure sufficient clearance to be able to attach the ductwork to the side return.

*Figure 10.*




- **Side plenum return configuration**
  A minimum of 2.5" (63.5 mm) should be free for airflow on each side, to allow the air to flow into the returns.

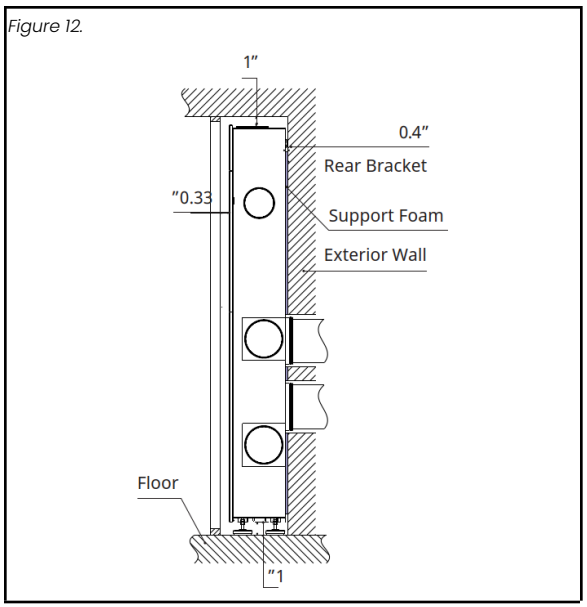
*Figure 11.*




- **Front**
  The clearance required in front of the unit to the access panel is 2" (50.8 mm) to minimize noise from vibrations.

- **Rear**
  There must be a 2" (50.8 mm) minimum clearance between the unit and the 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 36" (914.4 mm).

*Figure 12.*



# 5. TECHNICAL SPECIFICATIONS

## 5.1 High Performance

### 5.1.1 Cooling

*Table 1. High Performance - Cooling*

| Heat Pump only | | | 95°F (35°C) (1) | 105°F (40.6°C) (2) | 115°F (46.1°C) (3) |
|---|---|---|---|---|---|
| Capacity | Maximum | BTU/hr | 14,400 | 13,100 | 11,800 |
| | Recommended* | | 9,790 | 8,500 | 7,800 |
| | Rated | | 8,900 | 7,609 | 6,920 |
| | Minimum | | 3,600 | 3,600 | 3,400 |
| Input Power | Maximum | W | 1,750 | 1,680 | 1,750 |
| | Recommended* | | 953 | 970 | 1,060 |
| | Rated | | 813 | 845 | 925 |
| | Minimum | | 250 | 275 | 300 |
| Efficiency | Maximum | EER | 8.23 | 7.8 | 6.74 |
| | Recommended* | | 10.27 | 8.8 | 7.40 |
| | Rated | EER2 | 10.95 | 9.00 | 7.47 |
| | Seasonal | SEER2 | 14.35 | - | - |
| Moisture Removal | | Pts/h | 1.8 | 2.0 | 2.2 |
| | | L/hr | 0.9 | 0.9 | 1.0 |

**Notes**
(1) ID: 80°F(26.7°C), W.B. 67°F(19.4°C) | OD: 95°F(35°C), W.B. 75°F(23.9°C)
(2) ID: 80°F(26.7°C), W.B. 67°F(19.4°C) | OD: 105°F(40.6°C), W.B. 75°F(23.9°C)
(3) ID: 80°F(26.7°C), W.B. 67°F(19.4°C) | OD: 115°F(46.1°C), W.B. 75°F(23.9°C)
* This is the recommended capacity for sizing the unit to the space.

### 5.1.2 Heating

*Table 2. High Performance - Heating*

| Heat Pump only | | | 47°F (8.3 °C) (1) | 17°F (-8.3 °C) (2) | 5°F (-15°C ) (3) | 0°F (-17.8° C) (4) | -5°F (-20.6 °C) (5) |
|---|---|---|---|---|---|---|---|
| Capacity | Maximum | BTU/ hr | 13,800 | 9,400 | 6,700 | 6,400 | 6,000 |
| | Recomm-ended* | | 10,000 | 9,000 | 6,500 | 6,127 | 5,800 |
| | Rated | | 8,900 | 9,000 | 6,500 | 6,127 | 5,800 |
| | Minimum | | 3,900 | 3,300 | 2,800 | 2,700 | 2,700 |
| Input Power | Maximum | W | 1,750 | 1,750 | 1,750 | 1,650 | 1,450 |
| | Recomm-ended* | | 820 | 1,148 | 1,108 | 1,075 | 1,036 |
| | Rated | | 712 | 1,146 | 1,108 | 1,075 | 1,036 |
| | Minimum | | 420 | 440 | 460 | 480 | 500 |
| Efficiency | Maximum | COP | 2.31 | 1.57 | 1.12 | 1.14 | 1.21 |
| | Recomm-ended* | | 3.60 | 2.30 | 1.72 | 1.67 | 1.64 |
| | Rated | | 3.66 | 2.30 | 1.72 | 1.67 | 1.64 |
| | Minimum | | 2.72 | 2.20 | 1.78 | 1.65 | 1.58 |
| | Seasonal | HSPF2 | 9.85 | - | - | - | - |

**Notes**
(1) ID: 70°F(21.1°C), W.B. 60°F(15.6°C) | OD: 47°F(8.3°C), W.B. 43°F(6.1°C)
(2) ID: 70°F(21.1°C), W.B. 60°F(15.6°C) | OD: 17°F(-8.3°C), W.B. 13°F(-10.6°C)
(3) ID: 70°F(21.1°C), W.B. 60°F(15.6°C) | OD: 5°F(-15°C), W.B. 3°F(-16.1°C)
(4) ID: 70°F(21.1°C), W.B. 60°F(15.6°C) | OD: 0°F(-17.8°C)
(5) ID: 70°F(21.1°C), W.B. 60°F(15.6°C) | OD: -5°F(-20.6°C)
* This is the recommended capacity for sizing the unit to the space.

Optional adjustable heat strips are available for an additional 6,100 BTU/hr heating capacity.

## 5.2 Energy Star Compliant

### 5.2.1 Cooling

*Table 3. Energy Star Compliant - Cooling*

| Heat Pump only | | | 95°F (35°C) (1) | 105°F (40.6°C) (2) | 115°F (46.1°C) (3) |
|---|---|---|---|---|---|
| Capacity | Maximum | BTU/hr | 14,400 | 13,100 | 11,800 |
| | Recommended* | | 9,790 | 8,500 | 7,800 |
| | Rated** | | 7,500 | 7,609 | 6,920 |
| | Minimum | | 3,600 | 3,600 | 3,400 |
| Input Power | Maximum | W | 1,750 | 1,680 | 1,750 |
| | Recommended* | | 953 | 970 | 1,060 |
| | Rated | | 647 | 845 | 925 |
| | Minimum | | 250 | 275 | 300 |
| Efficiency | Maximum | EER | 8.23 | 7.80 | 6.74 |
| | Recommended* | | 10.27 | 8.80 | 7.40 |
| | Rated | EER2 | 11.6 | 9.00 | 7.47 |
| | Seasonal | SEER2 | 15.35 | - | - |
| Moisture Removal | | Pts/h | 1.8 | 2.0 | 2.2 |
| | | L/hr | 0.9 | 0.9 | 1.0 |

**Notes**
(1) ID: 80°F(26.7°C), W.B. 67°F(19.4°C) | OD: 95°F(35°C), W.B. 75°F(23.9°C)
(2) ID: 80°F(26.7°C), W.B. 67°F(19.4°C) | OD: 105°F(40.6°C), W.B. 75°F(23.9°C)
(3) ID: 80°F(26.7°C), W.B. 67°F(19.4°C) | OD: 115°F(46.1°C), W.B. 75°F(23.9°C)
* This is the recommended capacity for sizing the unit to the space.

### 5.2.2 Heating

*Table 4. Energy Star Compliant - Heating*

| Heat Pump | | | 47°F (8.3 °C) (1) | 17°F (-8.3 °C) (2) | 5°F (-15°C) (3) | 0°F (-17.8 °C) (4) | -5°F (-20.6 °C) (5) |
|---|---|---|---|---|---|---|---|
| Capacity | Maximum | BTU/hr | 13,800 | 9,400 | 6,700 | 6,400 | 6,000 |
| | Recomm-ended* | | 10,000 | 9,000 | 6,500 | 6,127 | 5,800 |
| | Rated | | 8,200 | 8,900 | 6,400 | 6,127 | 5,800 |
| | Minimum | | 3,900 | 3,300 | 2,800 | 2,700 | 2,700 |
| Input Power | Maximum | W | 1,750 | 1,750 | 1,750 | 1,650 | 1,450 |
| | Recomm-ended* | | 820 | 1,148 | 1,108 | 1,075 | 1,036 |
| | Rated | | 656 | 1,132 | 1,072 | 1,075 | 1,036 |
| | Minimum | | 420 | 440 | 460 | 480 | 500 |
| Efficiency | Maximum | COP | 2.31 | 1.57 | 1.12 | 1.14 | 1.21 |
| | Recomm-ended* | | 3.60 | 2.30 | 1.72 | 1.67 | 1.64 |
| | Rated | | 3.66 | 2.30 | 1.75 | 1.67 | 1.64 |
| | Minimum | | 2.72 | 2.20 | 1.78 | 1.65 | 1.58 |
| | Seasonal | HSPF2 | 9.85 | - | - | - | - |

**Notes**

(1) ID: 70°F(21.1°C), W.B. 60°F(15.6°C) | OD: 47°F(8.3°C), W.B. 43°F(6.1°C)
(2) ID: 70°F(21.1°C), W.B. 60°F(15.6°C) | OD: 17°F(-8.3°C), W.B. 13°F(-10.6°C)
(3) ID: 70°F(21.1°C), W.B. 60°F(15.6°C) | OD: 5°F(-15°C), W.B. 3°F(-16.1°C)
(4) ID: 70°F(21.1°C), W.B. 60°F(15.6°C) | OD: 0°F(-17.8°C)
(5) ID: 70°F(21.1°C), W.B. 60°F(15.6°C) | OD: -5°F(-20.6°C)
* This is the recommended capacity for sizing the unit to the space.

Optional adjustable heat strips are available for an additional 6,100 BTU/hr heating capacity.

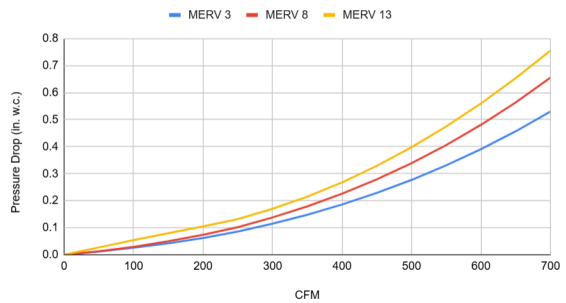
## 5.3 Airflow

### 5.3.1 Indoor

*Table 5. Airflow - Indoor*

| Air volume | | |
|---|---|---|
| Indoor | Type | ECM centrifugal |
| | CFM Range | 226-400 |
| | $m^3$/hr Range | 384-680 |
| | Nominal CFM | 350 |
| | Nominal $m^3$/hr | 595 |
| | Available ESP at Nominal | 0.4" WC (99.5 Pa) |
| | Supply connection | Top or front |
| | Return connection | Side - 2 required |
| | Speeds | Low, med, high, boost, auto |
| | Filter | MERV 3 - Optional MERV 8/13 |

*Figure 13. MERV Filter Pressure Drop*




### 5.3.2 Outdoor

*Table 6. Airflow - Outdoor*

| Air volume | | |
|---|---|---|
| Outdoor | Type | ECM centrifugal |
| | CFM Range | 385-638 |
| | $m^3$/hr Range | 654-1084 |
| | Nominal CFM | 400 |
| | Nominal $m^3$/hr | 680 |
| | Available ESP at Nominal | 0.7" WC (174.4 Pa) |
| | Intake and Exhaust Connection | 8" (203 mm) round |
| | Speeds | Low, med, high, auto |

## 5.4 Sound

*Table 7. Sound*

| Sound | | | |
|---|---|---|---|
| Location | Distance | Fan Speed | Sound Level (dB(A)) |
| Indoor | 1 m | Level 1 - Low | 40 |
| | | Level 2 - Medium | 49 |
| | | Level 3 - High | 50 |
| | 3 m | Level 1 - Low | 32 |
| | | Level 2 - Medium | 41 |
| | | Level 3 - High | 42 |
| Outdoor | - | Range | 28 - 55 |

## 5.5 General

### 5.5.1 Controls

*Table 8. General - Controls*

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

### 5.5.2 Modes

*Table 9. General - Modes*

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

### 5.5.3 Condensate

*Table 10. General - Condensate*

| Condensate | |
|---|---|
| Pipe size | 3/4" (19 mm) outside diameter |
| Pipe material | Rubber |

### 5.5.4 Physical

For detailed dimensions, refer to the drawings in Section 7.

*Table 11. General - Physical*

| Physical data | | | |
|---|---|---|---|
| Dimensions | | in | 28.7 W x 84.4 H x 12.4 D |
| | | mm | 729 W x 2145 H x 315 D |
| Weight | Net | lb | 170 |
| | | kg | 77.1 |
| | Gross | lb | 190 |
| | | kg | 86.1 |
| Cabinet | Finish | | Black covered with dark gray EPDM |
| | Material | | Steel |

### 5.5.5 General

*Table 12: General - Compressor*

| Compressor | | |
|---|---|---|
| Type | BLDC twin rotary inverter | |
| Refrigerant | Type | R32 |
| | Quantity | 24 oz. |
| | | 0.7 kg |
| Oil Type | Fv50s (ISO 50) | |

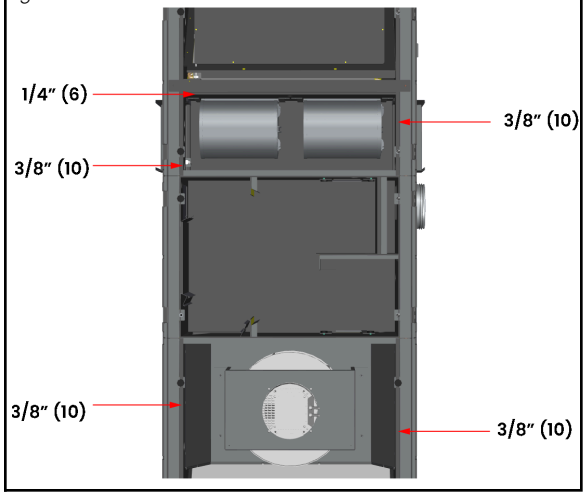
### 5.5.6 Insulation

*Table 13: General - Insulation*

| | |
|---|---|
| Thermal conductivity at 50°F | 0.239 BTU*in/(hr·ft²·°F) |
| Thermal conductivity at 10°C | 0.0344 W/(m·K) |

Insulation R-value is determined by dividing the insulation thickness by the thermal conductivity (k-value). Insulation thickness varies by component and configuration.

*Figure 14. Insulation Thickness*




## 5.6 Electrical

### 5.6.1 General

*Table 14. Electrical - General*

| General | | 115V | 230V |
|---|---|---|---|
| Volt range | | 103 - 127 | 180 - 253 |
| Hz/phase | | 60 Hz / single phase | |
| Power input connection | | Hardwire | LCDI power cord or hardwire |
| Power factor | | 0.96 | |
| Input power (standby) | W | 10.8 | |
| Input power (off mode) | | 1.5 | |
| **Heat Pump Only** | | | |
| Cooling (nominal) | A | 15.9 | 7.9 |
| Cooling (max) | | 19.0 | 9.5 |
| Heating - heat pump only (nom.) | | 15.9 | 7.9 |
| Heating-heat pump only (max) | | 19.0 | 9.5 |
| **Heat Pump + 900 W Electric Heater** | | | |
| Maximum | A | 27.2 | - |
| **Heat Pump + 1,800 W Electric Heater** | | | |
| Maximum | A | - | 17.3 |
| **Heat Pump + 2,700 W Electric Heater** | | | |
| Maximum | A | - | 21.2 |

*Table 15. Electrical - Circuit breakers*

| Circuit breakers | | | 115V | 208V | 230V | 240V |
|---|---|---|---|---|---|---|
| Heat Pump Only | MCA | A | 23 | 13 | 11 | 11 |
| | MOCP | | 35 | 15 | 15 | 15 |
| Heat Pump + 900W Elec Heat | MCA | A | 31 | - | - | - |
| | MOCP | | 40 | - | - | - |
| Heat Pump + 1,800W Elec Heat | MCA | A | - | 20 | 19 | 19 |
| | MOCP | | - | 25 | 25 | 25 |
| Heat Pump + 2,700W Elec Heat | MCA | A | - | 23 | 24 | 24 |
| | MOCP | | - | 25 | 25 | 30 |

### 5.6.2 Motors

*Table 16. Electrical - Motors*

| Motors | | | 115V | 208V | 230V | 240V |
|---|---|---|---|---|---|---|
| Compressor | RLA | A | 13 | 6.6 | 6 | 5.8 |
| | LRA | | 13 | 6.6 | 6 | 5.8 |
| Indoor ECM fan motor | Watts (max) | W | 200 | | | |
| | FLA | A | 2.4 | 1.33 | 1.2 | 1.15 |
| | Power | HP | 1/10 | | | |
| Outdoor ECM fan motor | Watts (max) | W | 320 | 425 | | |
| | FLA | A | 3 | 2.2 | 2 | 1.9 |
| | Power | HP | 1/10 | 1/8 | 1/8 | 1/8 |

### 5.6.3 LCDI power cords

*Table 17. Electrical - LCDI Power cords*

| LCDI Power Cord | | 115V | 230V |
|---|---|---|---|
| Heat Pump Only | Amps | LCDI cord is not available in 115V above 20 A. | 15 |
| | Plug Type | | 6-15P |
| Heat Pump+1,800 W Elec Heat | Amps | | 20 |
| | Plug Type | | 6-20P |
| Heat Pump+2,700 W Elec Heat | Amps | | LCDI cord is not available above 20 A. |
| | Plug Type | | |

For units requiring a breaker size above 20 A, a quick-connect whip cord is available as an accessory (60" (1524 mm) length).

### 5.6.4 Heater Output (W) and Heater Current (A) vs. Supply Voltage

*Table 18. Heater Output (W) and Heater Current (A) vs. Supply Voltage*

| Volt/Watt | 1000W | 900W | 1800W | 2700W |
|---|---|---|---|---|
| 115V | N/a | 900W / 7.8A | N/A | N/A |
| 208V | 818W / 3.9A | 736W / 3.5A | 1472W / 7.1A | 2200W / 10.6A |
| 230V | 1000W / 4.3A | 900W / 3.9A | 1800W / 7.8A | 2700W / 11.7A |
| 240V | 1089W / 4.5A | 980W / 4.1A | 1960W / 8.2A | 3000W / 12.5A |

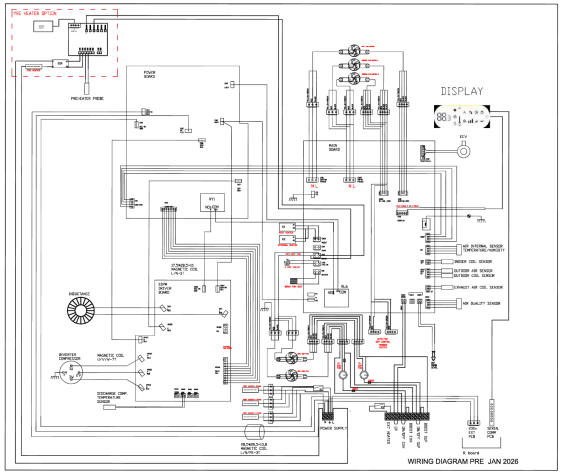
## 6. WIRING DIAGRAMS - 230V

### 6.1 Units produced before January, 2026

To view the diagram as a high-resolution PDF, click the link below:

AIO Vertical Stack (Gen 3) Wiring Diagram (Pre-J...

*Figure 15.*

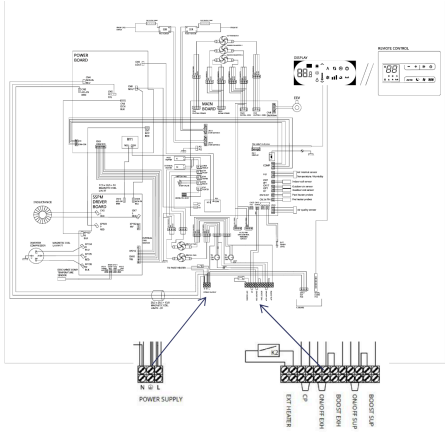



### 6.2 Units produced after January, 2026

To view the diagram as a high-resolution PDF, click the link below:

AIO Vertical Stack (Gen 3) Wiring Diagram (Post-...

*Figure 16.*



## 7. DIMENSIONS

To view the dimensions as a high-resolution PDF, click the link below:

AIO Vertical Stack (Gen 3) with Electric Heaters D...

*Figure 17. Vertical Stack Dimensions*

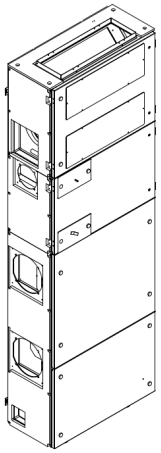


*Figure 18. Top view*

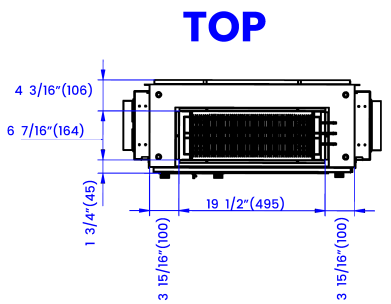



*Figure 19. Left view*

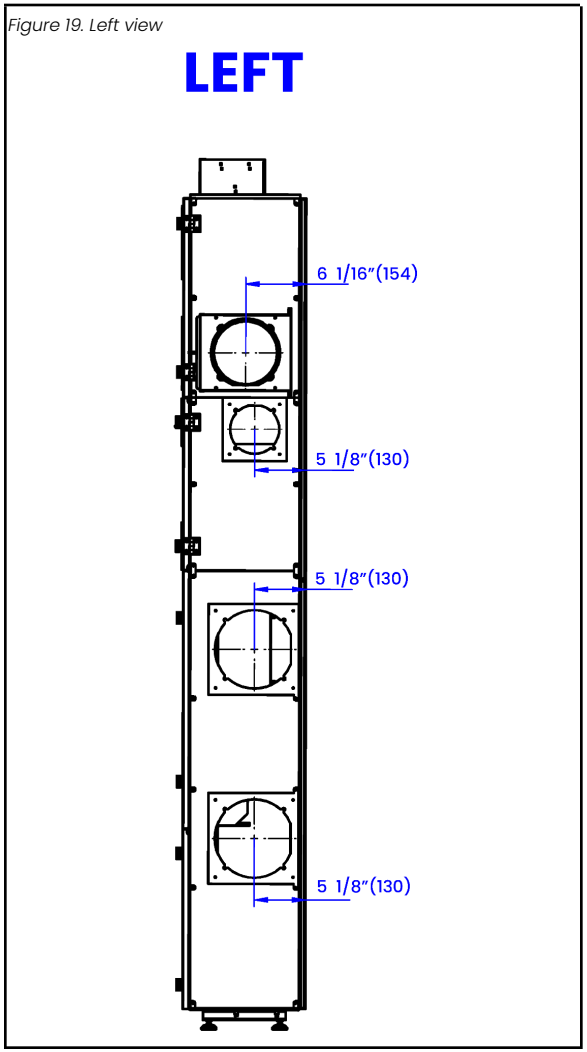



*Figure 20. Front view*

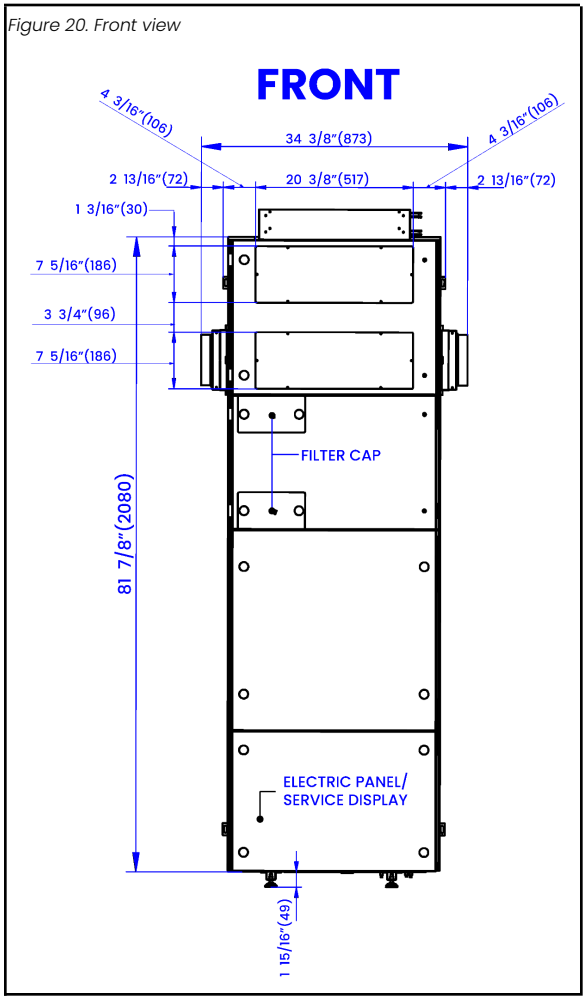
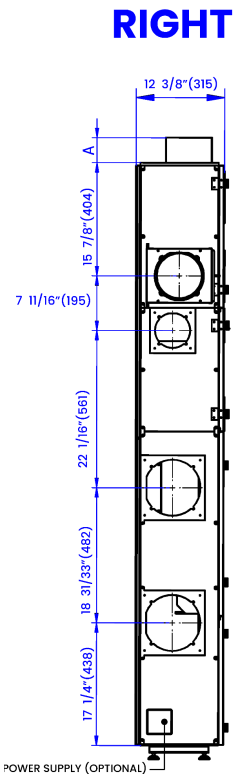


*Figure 21. Right view*




| HEATER OPTIONS (A in Diagram) | Height |
|---|---|
| 1.8 kW | 0.63" (16) |
| 2.7 kW | 3.5" (89) |

*Figure 22. Rear view*

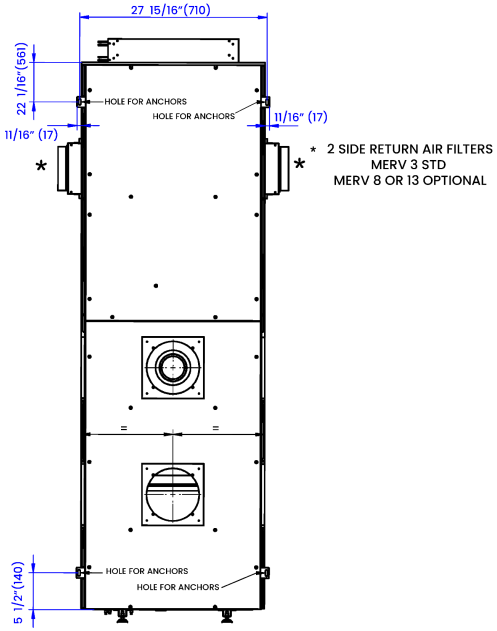
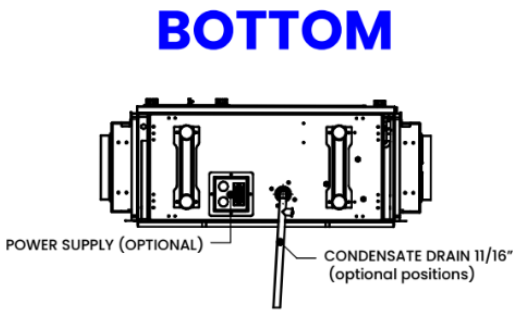



*Figure 23. Bottom view*




# 8. WARRANTY

## 8.1 Basic Coverage

- **Parts:** 5 years from delivery.
- **Compressor:** 10 years from delivery.
- **Labor:** 2 years from certification (only if at least 10 units are installed, the site is certified by INNOVA or self-certified, and spare stock equal to 3% of total units is maintained)
- **Controllers:** Covered under a 2-year warranty.

## 8.2 Optional Extended Coverage

- **Additional 2-Year Parts & Labor Warranty:** Extends the basic coverage to 4 years labor and 7 years parts.
- **Extended 10-Year Parts Warranty:** Extends parts coverage to 10 years total.
- **Extended 5-Year Full Warranty:** Extends full parts and labor coverage to 5 years total.
- **Extended 10-Year Full Warranty:** Provides a 10-year full warranty on parts, labor, and compressor.
- **Extended 15-Year Full Warranty:** Provides a 15-year full warranty on parts, labor, and compressor.

## 8.3 Validation Requirements

- Installation must be certified by an INNOVA technician or self-certified within 30 days.
- Installers must complete INNOVA training.
- The system must comply with local codes, use approved louvers, and be properly maintained (e.g., clean filters monthly, coils every 18 months).

For warranty service or claims, contact INNOVA Support at vip@innova.co or (212) 204-2700.

For detailed terms and conditions, click the link below:

AIO Warranty Terms and Conditions - 2026 - INN...

# 9. SUBMITTALS

## 9.1 115V Heat pump only - High Performance

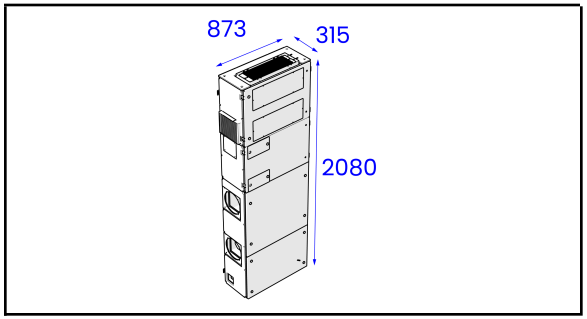
AIO™ VERTICAL STACK - 115V - NO ELECTRIC HEAT - R32 - SUBMITTAL (AVP10N3H1)

| | | |
|---|---|---|
| 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
- Electronically controlled air louver Compact, slim design
- 4 selectable fan speeds + Auto
- 10-Year limited warranty (after certification)
- Made in Italy
- Onboard touch controller
- Washable filter

The installing contractor must contact INNOVA Customer Technical Support prior to installation to schedule an installation training overview.
This may be conducted in person or remotely (online). It is the official installation training and may include videos, best practices, and system requirements.
Performing installations without training may result in installation errors, performance issues, and possible warranty limitations.




| Performance Specifications | | | |
|---|---|---|---|
| Cooling | Min-Max | BTU/H | 14,400 - 3,600 |
| | Rated capacity (95°F [35°C]) | | 8,900 |
| | Efficiency | EER2 | 10.95 |
| Heating | Min-Max | BTU/H | 13,800 - 3,900 |
| | Rated capacity (47°F [8.3°C]) | | 8,900 |
| | Rated capacity (5°F [-15°C]) | | 6,500 |
| | Efficiency | COP | 3.66 |
| Sound | Indoor: Low-High at 1 m distance | db(A) | 40 - 50 |
| | Indoor: Low-High at 3 m distance | | 32 - 42 |
| | Outdoor sound range | | 28 - 55 |
| Moisture removal | | Pts/h | 1.8 |
| | | L/hr | 0.9 |
| Airflow | Indoor | CFM | 226 - 400 |
| | | $m^3/hr$ | 384 - 680 |
| | Outdoor | CFM | 385 - 638 |
| | | $m^3/hr$ | 654 - 1084 |

| Electric Specifications | |
|---|---|
| Power Supply (V/Ph/Hz) | 115V/1Ph/60Hz |
| Voltage Range | 103-127 |
| Running Amps Cooling | 15.9 |
| Running Amps Heating | 15.9 |
| MCA | 23 |
| Maximum Overcurrent Protection (A) | 35 |
| Max Power Input (amps) Cooling | 19.0 |
| Max Power Input (amps) Heating | 19.0 |

| Included | 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 |
| ☐ | WiFi App | WIFI30 |
| ☐ | E-Paper EOS Controller | EEOS12 |
| ☐ | Simple EOS Controller | SEOS12 |
| ☐ | Integration gateway for LTCH20, TFTH20 and MODBUS | GWN |
| ☐ | Integration gateway for LTCH20, TFTH20, MODBUS, BACnet, and third-party thermostats | GWX |

| Included | LCDI Power Cords | NEMA | SKU |
|---|---|---|---|
| ☐ | 89 in. (2260.6 mm) | 6-15P | L259A |

## 9.2 115V Heat pump + elec heat - High Performance

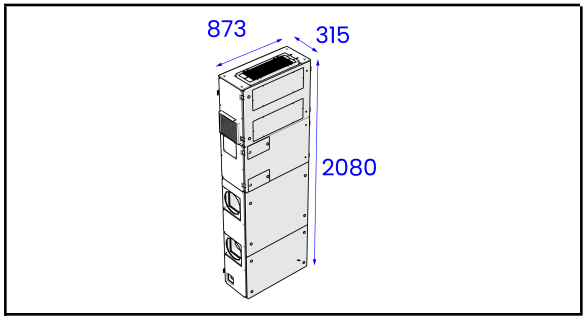
AIO™ VERTICAL STACK - 115V - 900W ELECTRIC HEAT - R32 - SUBMITTAL (AVE10N3H1)

| | | |
|---|---|---|
| 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
- Washable filter
- Compact, slim design
- 4 selectable fan speeds + Auto
- 10-Year limited warranty (after certification)
- Made in Italy

The installing contractor must contact INNOVA Customer Technical Support prior to installation to schedule an installation training overview.
This may be conducted in person or remotely (online). It is the official installation training and may include videos, best practices, and system requirements.
Performing installations without training may result in installation errors, performance issues, and possible warranty limitations.




| Performance Specifications | | | |
|---|---|---|---|
| Cooling | Min-Max | BTU/H | 14,400 - 3,600 |
| | Rated capacity (95°F [35°C]) | | 8,900 |
| | Efficiency | EER2 | 10.95 |
| Heating | Min-Max | BTU/H | 13,800 - 3,900 |
| | Rated capacity (47°F [8.3°C]) | | 8,900 |
| | Rated capacity (5°F [-15°C]) | | 6,500 |
| | Efficiency | COP | 3.66 |
| Sound | Indoor: Low-High at 1 m distance | db(A) | 40 - 50 |
| | Indoor: Low-High at 3 m distance | | 32 - 42 |
| | Outdoor sound range | | 28 - 55 |
| Moisture removal | | Pts/h | 1.8 |
| | | L/hr | 0.9 |
| Airflow | Indoor | CFM | 226 - 400 |
| | | $m^3/hr$ | 384 - 680 |
| | Outdoor | CFM | 385 - 638 |
| | | $m^3/hr$ | 654 - 1084 |

| Electric Specifications | |
|---|---|
| Power Supply (V/Ph/Hz) | 115V/1Ph/60Hz |
| Voltage Range | 103-127 |
| Running Amps Cooling | 15.9 |
| Running Amps Heating | 15.9 |
| MCA | 31 |
| Maximum Overcurrent Protection (A) | 40 |
| Max Power Input (amps) Cooling | 19.0 |
| Max Power Input (amps) Heating | 27.2 |

| Included | 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 |
| ☐ | WiFi App | WIFI30 |
| ☐ | E-Paper EOS Controller | EEOS12 |
| ☐ | Simple EOS Controller | SEOS12 |
| ☐ | Integration gateway for LTCH20, TFTH20 and MODBUS | GWN |
| ☐ | Integration gateway for LTCH20, TFTH20, MODBUS, BACnet, and third-party thermostats | GWX |

| Included | LCDI Power Cords | NEMA | SKU |
|---|---|---|---|
| ☐ | 89 in. (2260.6 mm) | 6-15P | L259A |

## 9.3 230V Heat pump only - High Performance

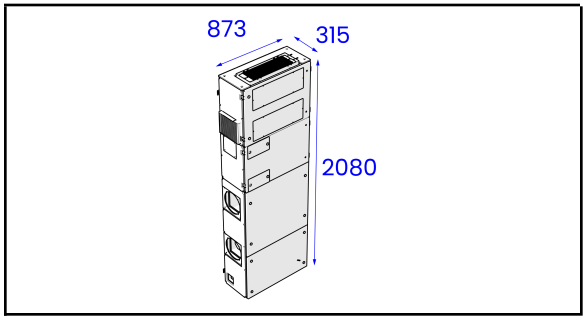
AIO™ VERTICAL STACK - 230V -NO ELECTRIC HEAT - R32 - SUBMITTAL (AVP10N3H2)

| | | |
|---|---|---|
| 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
- Washable filter
- Compact, slim design
- 4 selectable fan speeds + Auto
- 10-Year limited warranty (after certification)
- Made in Italy

The installing contractor must contact INNOVA Customer Technical Support prior to installation to schedule an installation training overview.
This may be conducted in person or remotely (online). It is the official installation training and may include videos, best practices, and system requirements.
Performing installations without training may result in installation errors, performance issues, and possible warranty limitations.




| Performance Specifications | | | |
|---|---|---|---|
| Cooling | Min-Max | BTU/H | 14,400 - 3,600 |
| | Rated capacity (95°F [35°C]) | | 8,900 |
| | Efficiency | EER2 | 10.95 |
| Heating | Min-Max | BTU/H | 13,800 - 3,900 |
| | Rated capacity (47°F [8.3°C]) | | 8,900 |
| | Rated capacity (5°F [-15°C]) | | 6,500 |
| | Efficiency | COP | 3.66 |
| Sound | Indoor: Low-High at 1 m distance | db(A) | 40 - 50 |
| | Indoor: Low-High at 3 m distance | | 32 - 42 |
| | Outdoor sound range | | 28 - 55 |
| Moisture removal | | Pts/h | 1.8 |
| | | L/hr | 0.9 |
| Airflow | Indoor | CFM | 226 - 400 |
| | | $m^3/hr$ | 384 - 680 |
| | Outdoor | CFM | 385 - 638 |
| | | $m^3/hr$ | 654 - 1084 |

| Electric Specifications | |
|---|---|
| Power Supply (V/Ph/Hz) | 230V/1Ph/60Hz |
| Voltage Range | 180 - 253 |
| Running Amps Cooling | 7.9 |
| Running Amps Heating | 7.9 |
| MCA | 11 |
| Maximum Overcurrent Protection (A) | 15 |
| Max Power Input (amps) Cooling | 9.5 |
| Max Power Input (amps) Heating | 9.5 |

| Included | 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 |
| ☐ | WiFi App | WIFI30 |
| ☐ | E-Paper EOS Controller | EEOS12 |
| ☐ | Simple EOS Controller | SEOS12 |
| ☐ | Integration gateway for LTCH20, TFTH20 and MODBUS | GWN |
| ☐ | Integration gateway for LTCH20, TFTH20, MODBUS, BACnet, and third-party thermostats | GWX |

| Included | LCDI Power Cords | NEMA | SKU |
|---|---|---|---|
| ☐ | 89 in. (2260.6 mm) | 6-15P | L259A |

## 9.4 230V Heat pump + 1,800W elec heat - High Performance

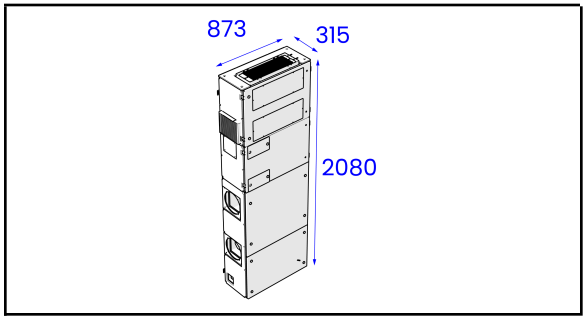
AIO™ VERTICAL STACK - 230V - 1,800W ELECTRIC HEAT STRIP - R32 -SUBMITTAL (AVK10N3H2)

| | | |
|---|---|---|
| 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 or 1,800W electric heat supplement
- Auto restart
- Intelligent defrost
- No outdoor unit
- Condensate disbursement systems
- Onboard touch controller
- Washable filter
- Compact, slim design
- 4 selectable fan speeds + Auto
- 10-Year limited warranty (after certification)
- Made in Italy

The installing contractor must contact INNOVA Customer Technical Support prior to installation to schedule an installation training overview.
This may be conducted in person or remotely (online). It is the official installation training and may include videos, best practices, and system requirements.
Performing installations without training may result in installation errors, performance issues, and possible warranty limitations.




| Performance Specifications | | | |
|---|---|---|---|
| Cooling | Min-Max | BTU/H | 14,400 - 3,600 |
| | Rated capacity (95°F [35°C]) | | 8,900 |
| | Efficiency | EER2 | 10.95 |
| Heating | Min-Max | BTU/H | 13,800 - 3,900 |
| | Rated capacity (47°F [8.3°C]) | | 8,900 |
| | Rated capacity (5°F [-15°C]) | | 6,500 |
| | Efficiency | COP | 3.66 |
| Sound | Indoor: Low-High at 1 m distance | db(A) | 40 - 50 |
| | Indoor: Low-High at 3 m distance | | 32 - 42 |
| | Outdoor sound range | | 28 - 55 |
| Moisture removal | | Pts/h | 1.8 |
| | | L/hr | 0.9 |
| Airflow | Indoor | CFM | 226 - 400 |
| | | $m^3/hr$ | 384 - 680 |
| | Outdoor | CFM | 385 - 638 |
| | | $m^3/hr$ | 654 - 1084 |

| Electric Specifications | |
|---|---|
| Power Supply (V/Ph/Hz) | 230V/1Ph/60Hz |
| Voltage Range | 180 - 253 |
| Running Amps Cooling | 7.9 |
| Running Amps Heating | 7.9 |
| MCA | 19 |
| Maximum Overcurrent Protection (A) | 20 |
| Max Power Input (amps) Cooling | 9.5 |
| Max Power Input (amps) Heating | 17.33 |

| Included | 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 |
| ☐ | WiFi App | WIFI30 |
| ☐ | E-Paper EOS Controller | EEOS12 |
| ☐ | Simple EOS Controller | SEOS12 |
| ☐ | Integration gateway for LTCH20, TFTH20 and MODBUS | GWN |
| ☐ | Integration gateway for LTCH20, TFTH20, MODBUS, BACnet, and third-party thermostats | GWX |

| Included | LCDI Power Cords | NEMA | SKU |
|---|---|---|---|
| ☐ | 89 in. (2260.6 mm) | 6-15P | L259A |

## 9.5 230V Heat pump + 2,700W elec heat - High Performance

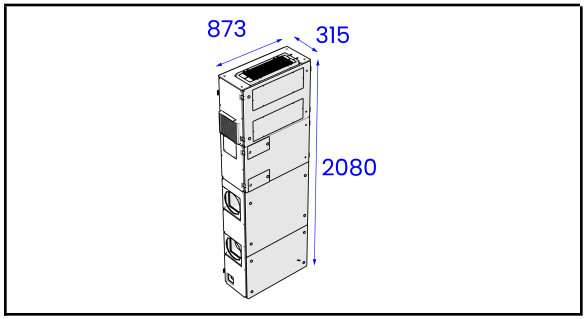
AIO™ VERTICAL STACK - 230V - 2,700W ELECTRIC HEAT STRIP - R32 -SUBMITTAL (AVL10N3H2)

| | | |
|---|---|---|
| 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 2,700W electric heat supplement
- Auto restart
- Intelligent defrost
- No outdoor unit
- Condensate disbursement systems
- Onboard touch controller
- Washable filter
- Compact, slim design
- 4 selectable fan speeds + Auto
- 10-Year limited warranty (after certification)
- Made in Italy

The installing contractor must contact INNOVA Customer Technical Support prior to installation to schedule an installation training overview.
This may be conducted in person or remotely (online). It is the official installation training and may include videos, best practices, and system requirements.
Performing installations without training may result in installation errors, performance issues, and possible warranty limitations.




| Performance Specifications | | | |
|---|---|---|---|
| Cooling | Min-Max | BTU/H | 14,400 - 3,600 |
| | Rated capacity (95°F [35°C]) | | 8,900 |
| | Efficiency | EER2 | 10.95 |
| Heating | Min-Max | BTU/H | 13,800 - 3,900 |
| | Rated capacity (47°F [8.3°C]) | | 8,900 |
| | Rated capacity (5°F [-15°C]) | | 6,500 |
| | Efficiency | COP | 3.66 |
| Sound | Indoor: Low-High at 1 m distance | db(A) | 40 - 50 |
| | Indoor: Low-High at 3 m distance | | 32 - 42 |
| | Outdoor sound range | | 28 - 55 |
| Moisture removal | | Pts/h | 1.8 |
| | | L/hr | 0.9 |
| Airflow | Indoor | CFM | 226 - 400 |
| | | $m^3/hr$ | 384 - 680 |
| | Outdoor | CFM | 385 - 638 |
| | | $m^3/hr$ | 654 - 1084 |

| Electric Specifications | |
|---|---|
| Power Supply (V/Ph/Hz) | 230V/1Ph/60Hz |
| Voltage Range | 180 - 253 |
| Running Amps Cooling | 7.9 |
| Running Amps Heating | 7.9 |
| MCA | 24 |
| Maximum Overcurrent Protection (A) | 25 |
| Max Power Input (amps) Cooling | 9.5 |
| Max Power Input (amps) Heating | 21.2 |

| Included | 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 |
| ☐ | WiFi App | WIFI30 |
| ☐ | E-Paper EOS Controller | EEOS12 |
| ☐ | Simple EOS Controller | SEOS12 |
| ☐ | Integration gateway for LTCH20, TFTH20 and MODBUS | GWN |
| ☐ | Integration gateway for LTCH20, TFTH20, MODBUS, BACnet, and third-party thermostats | GWX |

| Included | LCDI Power Cords | NEMA | SKU |
|---|---|---|---|
| ☐ | | | |

## 9.6 115V Heat pump only - Energy Star Compliant

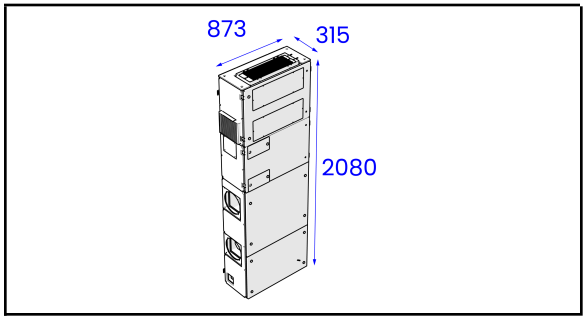
AIO™ VERTICAL STACK - 115V - NO ELECTRIC HEAT - R32 - SUBMITTAL (AVP10N3H1)

| | | |
|---|---|---|
| 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
- Washable filter
- Electronically controlled air louver
- Compact, slim design
- 4 selectable fan speeds + Auto
- 10-Year limited warranty (after certification)
- Made in Italy

The installing contractor must contact INNOVA Customer Technical Support prior to installation to schedule an installation training overview.
This may be conducted in person or remotely (online). It is the official installation training and may include videos, best practices, and system requirements.
Performing installations without training may result in installation errors, performance issues, and possible warranty limitations.




| Performance Specifications | | | |
|---|---|---|---|
| Cooling | Min-Max | BTU/H | 14,400 - 3,600 |
| | Rated capacity (95°F [35°C]) | | 7,500 |
| | Efficiency | EER2 | 11.6 |
| Heating | Min-Max | BTU/H | 13,800 - 3,900 |
| | Rated capacity (47°F [8.3°C]) | | 8,200 |
| | Rated capacity (5°F [-15°C]) | | 6,400 |
| | Efficiency | COP | 3.66 |
| Sound | Indoor: Low-High at 1 m distance | db(A) | 40 - 50 |
| | Indoor: Low-High at 3 m distance | | 32 - 42 |
| | Outdoor sound range | | 28 - 55 |
| Moisture removal | | Pts/h | 1.8 |
| | | L/hr | 0.9 |
| Airflow | Indoor | CFM | 226 - 400 |
| | | $m^3/hr$ | 384 -680 |
| | Outdoor | CFM | 385 - 638 |
| | | $m^3/hr$ | 654 - 1084 |

| Electric Specifications | |
|---|---|
| Power Supply (V/Ph/Hz) | 115V/1Ph/60Hz |
| Voltage Range | 103-127 |
| Running Amps Cooling | 15.9 |
| Running Amps Heating | 15.9 |
| MCA | 23 |
| Maximum Overcurrent Protection (A) | 35 |
| Max Power Input (amps) Cooling | 19.0 |
| Max Power Input (amps) Heating | 19.0 |

| Included | 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 |
| ☐ | WiFi App | WIFI30 |
| ☐ | E-Paper EOS Controller | EEOS12 |
| ☐ | Simple EOS Controller | SEOS12 |
| ☐ | Integration gateway for LTCH20, TFTH20 and MODBUS | GWN |
| ☐ | Integration gateway for LTCH20, TFTH20, MODBUS, BACnet, and third-party thermostats | GWX |

| Included | LCDI Power Cords | NEMA | SKU |
|---|---|---|---|
| ☐ | 89 in. (2260.6 mm) | 6-15P | L259A |

## 9.7 115V Heat pump + elec heat - Energy Star Compliant

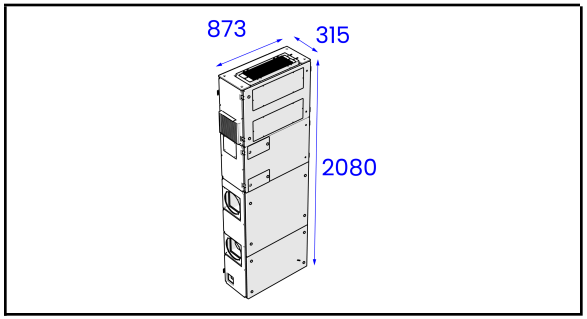
AIO™ VERTICAL STACK - 115V - 900W ELECTRIC HEAT - R32 - SUBMITTAL (AVE10N3H1)

| | | |
|---|---|---|
| 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
- Washable filter
- Compact, slim design
- 4 selectable fan speeds + Auto
- 10-Year limited warranty (after certification)
- Made in Italy

The installing contractor must contact INNOVA Customer Technical Support prior to installation to schedule an installation training overview.
This may be conducted in person or remotely (online). It is the official installation training and may include videos, best practices, and system requirements.
Performing installations without training may result in installation errors, performance issues, and possible warranty limitations.




| Performance Specifications | | | |
|---|---|---|---|
| Cooling | Min-Max | BTU/H | 14,400 - 3,600 |
| | Rated capacity (95°F [35°C]) | | 7,500 |
| | Efficiency | EER2 | 11.6 |
| Heating | Min-Max | BTU/H | 13,800 - 3,900 |
| | Rated capacity (47°F [8.3°C]) | | 8,200 |
| | Rated capacity (5°F [-15°C]) | | 6,400 |
| | Efficiency | COP | 3.66 |
| Sound | Indoor: Low-High at 1 m distance | db(A) | 40 - 50 |
| | Indoor: Low-High at 3 m distance | | 32 - 42 |
| | Outdoor sound range | | 28 - 55 |
| Moisture removal | | Pts/h | 1.8 |
| | | L/hr | 0.9 |
| Airflow | Indoor | CFM | 226 - 400 |
| | | $m^3/hr$ | 384 - 680 |
| | Outdoor | CFM | 385 - 638 |
| | | $m^3/hr$ | 654 - 1084 |

| Electric Specifications | |
|---|---|
| Power Supply (V/Ph/Hz) | 115V/1Ph/60Hz |
| Voltage Range | 103-127 |
| Running Amps Cooling | 15.9 |
| Running Amps Heating | 15.9 |
| MCA | 31 |
| Maximum Overcurrent Protection (A) | 40 |
| Max Power Input (amps) Cooling | 19.0 |
| Max Power Input (amps) Heating | 27.2 |

| Included | 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 |
| ☐ | WiFi App | WIFI30 |
| ☐ | E-Paper EOS Controller | EEOS12 |
| ☐ | Simple EOS Controller | SEOS12 |
| ☐ | Integration gateway for LTCH20, TFTH20 and MODBUS | GWN |
| ☐ | Integration gateway for LTCH20, TFTH20, MODBUS, BACnet, and third-party thermostats | GWX |

| Included | LCDI Power Cords | NEMA | SKU |
|---|---|---|---|
| ☐ | 89 in. (2260.6 mm) | 6-15P | L259A |

## 9.8 230V Heat pump only - Energy Star Compliant

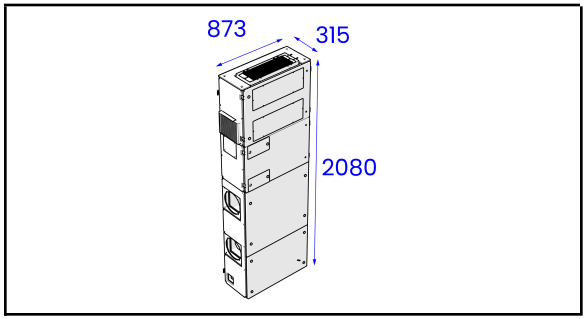
AIO™ VERTICAL STACK - 230V -NO ELECTRIC HEAT - R32 - SUBMITTAL (AVP10N3H2)

| | | |
|---|---|---|
| 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
- Washable filter
- Compact, slim design
- 4 selectable fan speeds + Auto
- 10-Year limited warranty (after certification)
- Made in Italy

The installing contractor must contact INNOVA Customer Technical Support prior to installation to schedule an installation training overview.
This may be conducted in person or remotely (online). It is the official installation training and may include videos, best practices, and system requirements.
Performing installations without training may result in installation errors, performance issues, and possible warranty limitations.




| Performance Specifications | | | |
|---|---|---|---|
| Cooling | Min-Max | BTU/H | 14,400 - 3,600 |
| | Rated capacity (95°F [35°C]) | | 7,500 |
| | Efficiency | EER2 | 11.6 |
| Heating | Min-Max | BTU/H | 13,800 - 3,900 |
| | Rated capacity (47°F [8.3°C]) | | 8,200 |
| | Rated capacity (5°F [-15°C]) | | 6,400 |
| | Efficiency | COP | 3.66 |
| Sound | Indoor: Low-High at 1 m distance | db(A) | 40 - 50 |
| | Indoor: Low-High at 3 m distance | | 32 - 42 |
| | Outdoor sound range | | 28 - 55 |
| Moisture removal | | Pts/h | 1.8 |
| | | L/hr | 0.9 |
| Airflow | Indoor | CFM | 226 - 400 |
| | | $m^3/hr$ | 384 - 680 |
| | Outdoor | CFM | 385 - 638 |
| | | $m^3/hr$ | 654 - 1084 |

| Electric Specifications | |
|---|---|
| Power Supply (V/Ph/Hz) | 230V/1Ph/60Hz |
| Voltage Range | 180 - 253 |
| Running Amps Cooling | 7.9 |
| Running Amps Heating | 7.9 |
| MCA | 11 |
| Maximum Overcurrent Protection (A) | 15 |
| Max Power Input (amps) Cooling | 9.5 |
| Max Power Input (amps) Heating | 9.5 |

| Included | 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 |
| ☐ | WiFi App | WIFI30 |
| ☐ | E-Paper EOS Controller | EEOS12 |
| ☐ | Simple EOS Controller | SEOS12 |
| ☐ | Integration gateway for LTCH20, TFTH20 and MODBUS | GWN |
| ☐ | Integration gateway for LTCH20, TFTH20, MODBUS, BACnet, and third-party thermostats | GWX |

| Included | LCDI Power Cords | NEMA | SKU |
|---|---|---|---|
| ☐ | 89 in. (2260.6 mm) | 6-15P | L259A |

## 9.9 230V Heat pump + 1,800W elec heat - Energy Star Compliant

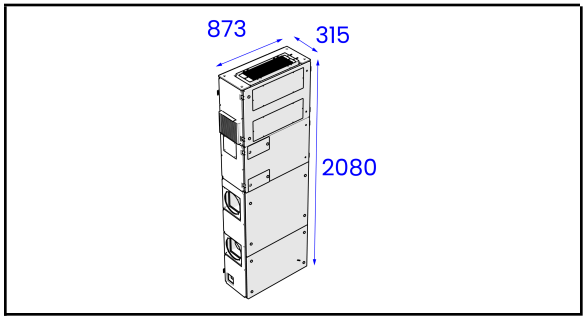
AIO™ VERTICAL STACK - 230V - 1,800W ELECTRIC HEAT STRIP - R32 -SUBMITTAL (AVK10N3H2)

| | | |
|---|---|---|
| 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 or 1,800W electric heat supplement
- Auto restart
- Intelligent defrost
- No outdoor unit
- Condensate disbursement systems
- Onboard touch controller
- Washable filter
- Compact, slim design
- 4 selectable fan speeds + Auto
- 10-Year limited warranty (after certification)
- Made in Italy

The installing contractor must contact INNOVA Customer Technical Support prior to installation to schedule an installation training overview.
This may be conducted in person or remotely (online). It is the official installation training and may include videos, best practices, and system requirements.
Performing installations without training may result in installation errors, performance issues, and possible warranty limitations.




| Performance Specifications | | | |
|---|---|---|---|
| Cooling | Min-Max | BTU/H | 14,400 - 3,600 |
| | Rated capacity (95°F [35°C]) | | 7,500 |
| | Efficiency | EER2 | 11.6 |
| Heating | Min-Max | BTU/H | 13,800 - 3,900 |
| | Rated capacity (47°F [8.3°C]) | | 8,200 |
| | Rated capacity (5°F [-15°C]) | | 6,400 |
| | Efficiency | COP | 3.66 |
| Sound | Indoor: Low-High at 1 m distance | db(A) | 40 - 50 |
| | Indoor: Low-High at 3 m distance | | 32 - 42 |
| | Outdoor sound range | | 28 - 55 |
| Moisture removal | | Pts/h | 1.8 |
| | | L/hr | 0.9 |
| Airflow | Indoor | CFM | 226 - 400 |
| | | $m^3/hr$ | 384 - 680 |
| | Outdoor | CFM | 385 - 638 |
| | | $m^3/hr$ | 654 - 1084 |

| Electric Specifications | |
|---|---|
| Power Supply (V/Ph/Hz) | 230V/1Ph/60Hz |
| Voltage Range | 180 - 253 |
| Running Amps Cooling | 7.9 |
| Running Amps Heating | 7.9 |
| MCA | 19 |
| Maximum Overcurrent Protection (A) | 20 |
| Max Power Input (amps) Cooling | 9.5 |
| Max Power Input (amps) Heating | 17.33 |

| Included | 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 |
| ☐ | WiFi App | WIFI30 |
| ☐ | E-Paper EOS Controller | EEOS12 |
| ☐ | Simple EOS Controller | SEOS12 |
| ☐ | Integration gateway for LTCH20, TFTH20 and MODBUS | GWN |
| ☐ | Integration gateway for LTCH20, TFTH20, MODBUS, BACnet, and third-party thermostats | GWX |

| Included | LCDI Power Cords | NEMA | SKU |
|---|---|---|---|
| ☐ | 89 in. (2260.6 mm) | 6-15P | L259A |

## 9.10 230V Heat pump + 2,700W elec heat - Energy Star Compliant

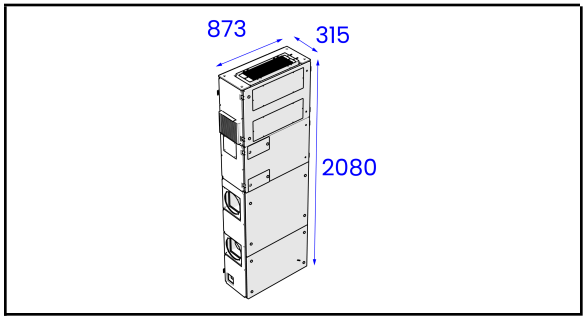
AIO™ VERTICAL STACK - 230V - 2,700W ELECTRIC HEAT STRIP - R32 -SUBMITTAL (AVL09N3H2)

| | | |
|---|---|---|
| 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 2,700W electric heat supplement
- Auto restart
- Intelligent defrost
- No outdoor unit
- Condensate disbursement systems
- Onboard touch controller
- Washable filter
- Compact, slim design
- 4 selectable fan speeds + Auto
- 10-Year limited warranty (after certification)
- Made in Italy

The installing contractor must contact INNOVA Customer Technical Support prior to installation to schedule an installation training overview.
This may be conducted in person or remotely (online). It is the official installation training and may include videos, best practices, and system requirements.
Performing installations without training may result in installation errors, performance issues, and possible warranty limitations.




| Performance Specifications | | | |
|---|---|---|---|
| Cooling | Min-Max | BTU/H | 14,400 - 3,600 |
| | Rated capacity (95°F [35°C]) | | 7,500 |
| | Efficiency | EER2 | 11.6 |
| Heating | Min-Max | BTU/H | 13,800 - 3,900 |
| | Rated capacity (47°F [8.3°C]) | | 8,200 |
| | Rated capacity (5°F [-15°C]) | | 6,400 |
| | Efficiency | COP | 3.66 |
| Sound | Indoor: Low-High at 1 m distance | db(A) | 40 - 50 |
| | Indoor: Low-High at 3 m distance | | 32 - 42 |
| | Outdoor sound range | | 28 - 55 |
| Moisture removal | | Pts/h | 1.8 |
| | | L/hr | 0.9 |
| Airflow | Indoor | CFM | 226 - 400 |
| | | $m^3/hr$ | 384 - 680 |
| | Outdoor | CFM | 385 - 638 |
| | | $m^3/hr$ | 654 - 1084 |

| Electric Specifications | |
|---|---|
| Power Supply (V/Ph/Hz) | 230V/1Ph/60Hz |
| Voltage Range | 180 - 253 |
| Running Amps Cooling | 7.9 |
| Running Amps Heating | 7.9 |
| MCA | 24 |
| Maximum Overcurrent Protection (A) | 25 |
| Max Power Input (amps) Cooling | 9.5 |
| Max Power Input (amps) Heating | 21.2 |

| Included | 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 |
| ☐ | WiFi App | WIFI30 |
| ☐ | E-Paper EOS Controller | EEOS12 |
| ☐ | Simple EOS Controller | SEOS12 |
| ☐ | Integration gateway for LTCH20, TFTH20 and MODBUS | GWN |
| ☐ | Integration gateway for LTCH20, TFTH20, MODBUS, BACnet, and third-party thermostats | GWX |

| Included | LCDI Power Cords | NEMA | SKU |
|---|---|---|---|
| ☐ | | | |

With over 20 years of experience in the climate comfort sector, we have a clear goal: growth through innovation. Our team is laser-focused on the conception, development, and production of innovative heating, ventilation, and air conditioning solutions. This mission has developed through bringing together technical skills, creativity, technology, design, Italian passion, and a global vision to achieve the best energy efficiency and performance.

innova.co | **USA:** 216-710-1000 **Canada:** 416-739-1000

MADE IN ITALY



Revised August 12, 2026

AIO™ Vertical Stack without ERV (Gen 3)
**Product Data Sheet**