AIO® Vertical Stack XL (with ERV)

Product Data Sheet

Note: The image shows the unit with a left-side vent. The unit also comes with right-side and back vent options.



innova

AHRI CERTIFIED®
www.ahridirectory.org
Unitary Small HP
AHRI Standard 210/240

neep

energy
ENERGY STAR

CONTACT INFO

VIP Customer/Technical Support
Email: vip@innova.co
Phone: (212) 204-2700

DISCLAIMER

This documentation is intended for informational use only and should not be construed as a binding representation or contract. This documentation is provided "as is" without warranty of any kind, either express or implied. INNOVA and its affiliates disclaim all liability arising from the use or misuse of this documentation.

Illustrations may not be to scale and all information and dimensions stated herein are subject to change at any time at the sole discretion of INNOVA. Benefits described herein apply only to the extent that the product is installed correctly in the correct application and used for its intended purpose.

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

CERTIFICATIONS & LISTINGS

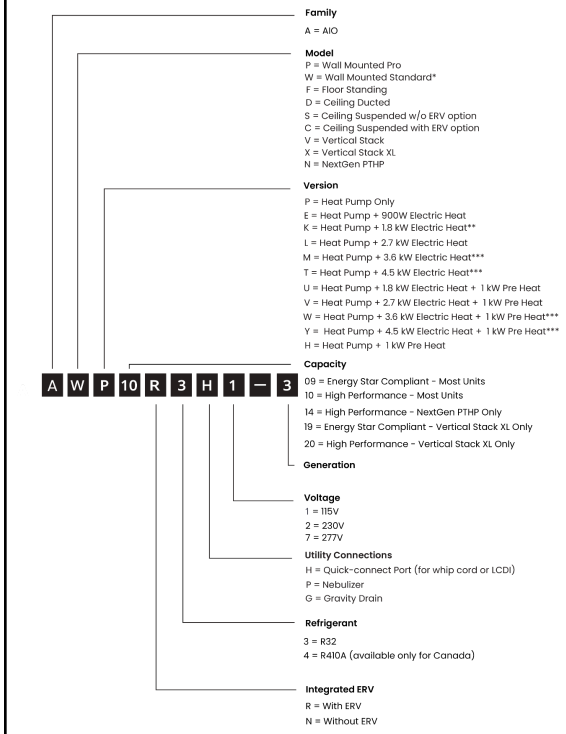
The AHRI Certified® mark indicates INNOVA's participation in the AHRI Certification program. For verification of individual certified products, go to www.ahridirectory.org.

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® nomenclature



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

AIO® is a registered trademark of INNOVA.
Copyright © 2026 INNOVA. All rights reserved.

CONTENTS

1. READING THIS DOCUMENTATION..... 4

1.1 Documentation-specific language..... 4

1.2 Annotation icons..... 4

2. AIO® VERTICAL STACK XL WITH ERV OVERVIEW..... 4

2.1 Components and structure..... 4

2.2 Key Features..... 5

3. AIRFLOW..... 6

3.1 Airflow operation..... 6

3.2 Airflow diagram..... 6

3.3 Fan coil part..... 6

3.4 Condenser part..... 7

3.5 Fan curves..... 7

4. INSTALLATION REQUIREMENTS..... 8

4.1 Air balancing requirements..... 8

4.2 Low ambient heating configuration requirement..... 8

4.3 Ambient temperature protection..... 8

4.4 Site requirements..... 8

4.5 Outdoor air louver options..... 9

5. TECHNICAL SPECIFICATIONS..... 9

5.1 High performance..... 9

5.1.1 Cooling..... 9

5.1.2 Heating..... 10

5.2 Energy star compliant..... 10

5.2.1 Cooling..... 10

5.2.2 Heating - Heat pump only..... 10

5.3 ERV..... 11

5.4 Airflow..... 11

5.4.1 Indoor..... 11

5.4.2 Outdoor..... 11

5.5 Sound..... 11

5.6 General..... 11

5.6.1 Controls..... 11

5.6.2 Modes..... 11

5.6.3 Condensate..... 11

5.6.4 Physical..... 12

5.6.5 General..... 12

5.6.6 Insulation..... 12

5.7 Electrical..... 12

5.7.1 General..... 12

5.7.2 Motors..... 12

5.7.3 LCDI power cords..... 13

6. WIRING DIAGRAM..... 13

7. DIMENSIONS..... 13

8. WARRANTY..... 14

8.1 Basic coverage..... 14

8.2 Optional extended coverage..... 14

8.3 Validation requirements..... 14

9. SUBMITTALS..... 15

9.1 230V Heat Pump Only - High Performance..... 15

9.2 230V Heat Pump + 3.6 kW Elec Heat - High Performance..... 16

9.3 230V Heat Pump + 4.5 kW Elec Heat - High Performance..... 17

9.4 230V Heat Pump + 4.5 kW Elec Heat + 1kW Preheat - High Performance..... 18

9.5 230V Heat Pump Only - Energy Star Compliant..... 19

9.6 230V Heat Pump + 3.6 kW Elec Heat - Energy Star Compliant..... 20

9.7 230V Heat Pump + 4.5 kW Elec Heat - Energy Star Compliant..... 21

9.8 230V Heat Pump + 4.5 kW Elec Heat + 1kW Preheat - Energy Star Compliant..... 22

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 XL 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 XL WITH ERV OVERVIEW

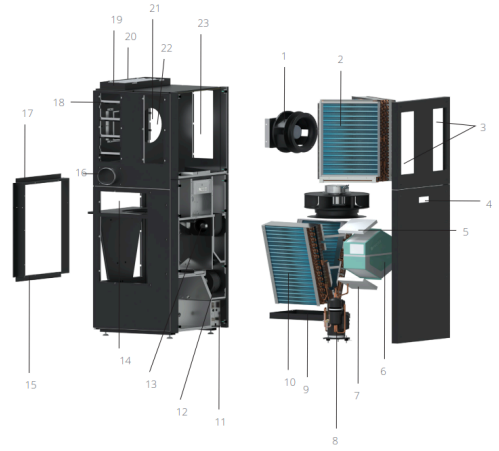
AIO® Vertical Stack XL is the ideal multi-room solution when a ceiling-mounted unit is not desired or feasible. The compact 23.8-inch (605mm) by 27.4-inch (695 mm) footprint uses minimal floor space. This unit is perfect anywhere direct venting or ducting is required, with up to 0.6" (15.2 mm) external static pressure. You can use any grille and louver combination for maximum design flexibility.

⚠ WARNING

Only qualified professionals should install this equipment. Improper modifications by an unqualified person could result in death or serious injury. When working on the equipment, observe all precautions in the guide and on labels attached to the equipment.

2.1 Components and structure

Figure 2. Vertical Stack XL with ERV components and structure



1	Indoor air ECM centrifugal supply fan	**13**	ECM outside air supply fan
2	Indoor heat exchanger	**14**	Rear condenser intake and exhaust option
3	Front return air option	**15**	Left side condenser intake and exhaust option
4	Touch controller and display	**16**	Bathroom exhaust
5	MERV 13 filter for outside air	**17**	Intake/exhaust flange - can be placed on rear, left, or right sides
6	ERV Core	**18**	Right supply air option
7	MERV 13 filter for stale air exhaust	**19**	Optional 3 kW electric heat strip
8	BLDC inverter compressor	**20**	Top supply air option
9	Condensate tray	**21**	Left return air option
10	Advanced outdoor heat exchanger	**22**	Right supply air option
11	Electronics	**23**	Right return air option
12	ECM stale air exhaust fan		

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 XL unit is ideal for any room or area that requires between 4,500 and 24,000 Btu/h of cooling capacity, or between 5,000 and 24,000 Btu/h of heating capacity.

Integrated ERV
AIO®'s integrated ERV eliminates the requirement of installing an independent ERV system, ducting, electrical work, and engineering.

Recovery plus™
With a patent-pending innovation, AIO® utilizes the heat or cold air remaining after passing through the recovery core to lower or raise the temperature of the condenser, providing a boost in performance and efficiency.

Integrated bathroom exhaust system
The integrated stale air exhaust can be used for bathrooms, maintaining perfect air pressure and eliminating the need for a dedicated exhaust system. 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. Additionally, stale air is passed through a second MERV 13 filter, keeping the core clean.

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 ensures correct airflow.

Cold climate heat pump
The heat pump efficiently functions in temperatures as low as 5°F (-15°C) outdoors, with continued operation to -10°F (-23°C) and below.

3,600-watt electric heat
The electric heat works in conjunction with the heat pump when the heat pump lacks sufficient power.

Intelligent defrosting
AIO®'s intelligent defrosting system means more time heating and less time on the reverse cycle defrost.

Quiet
With whisper-quiet operation as low as 27 decibels, the occupant will barely notice that the AIO® unit is in operation.

No outside noise infiltration
AIO® has the lowest Sound Transmission Class (STC) and Outdoor-Indoor Transmission Class (OITC) rating among comparable units. This means less outside noise intrudes into the room day and night.

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 4" (102 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 without having to remove the unit.

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, using the optional third-party kit. An optional BACnet and Modbus module enables interfacing with building management systems.

3. AIRFLOW

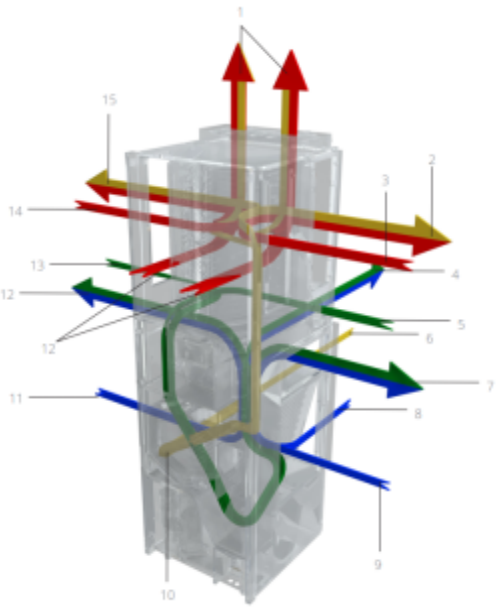
3.1 Airflow operation

AIO® Vertical Stack XL's powerful backward centrifugal ECM fan facilitates efficient condenser air movement through ductwork, enabling flexible placement within a room or apartment. Unlike traditional VTACs, it does not require an outside wall. The design allows air supply from the top or both sides, with flexible condenser intake options (left, right, or rear). Flexible ducting choices with 0.7" WC (174.4 Pa) make the AIO® Vertical Stack XL versatile for installation without restrictions in any residence.

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.

3.2 Airflow diagram

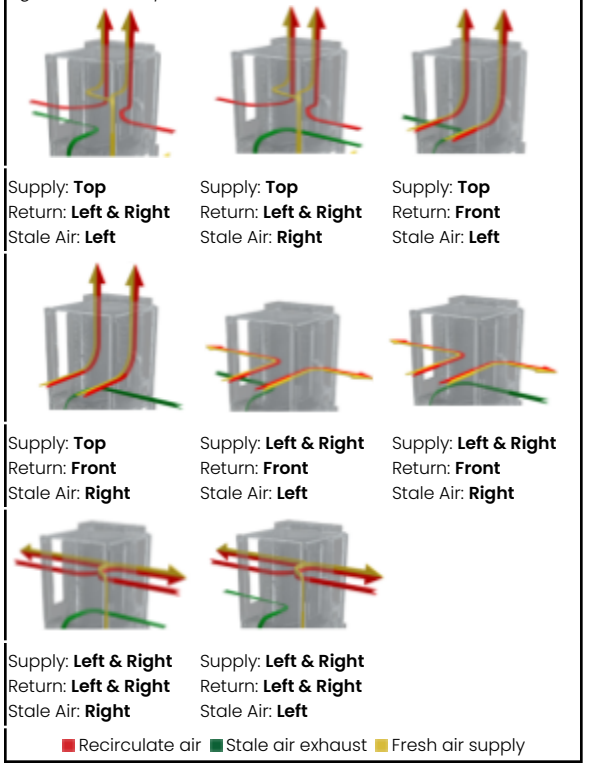
Figure 3. Airflow diagram



1	Top Supply	**9**	Left intake
2	Right Supply	**10**	ERV Core
3	Right Return	**11**	Right side intake
4	Rear condenser exhaust	**12**	Front return
5	Right intake of stale air/bathroom exhaust	**13**	Left condenser exhaust
6	Outside air intake	**14**	Left intake of stale air/bathroom exhaust
7	Right condenser exhaust	**15**	Left return
8	Rear intake		

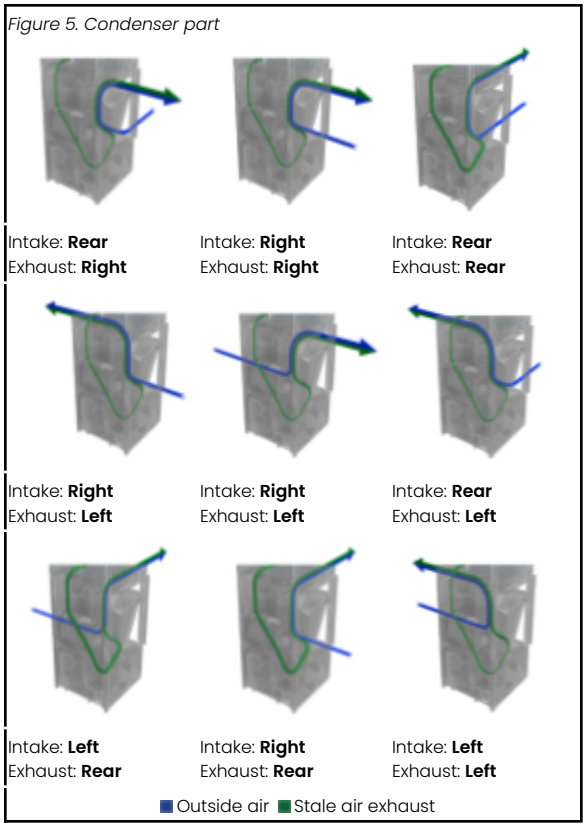
3.3 Fan coil part

Figure 4. Fan coil part



3.4 Condenser part

Figure 5. Condenser part



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

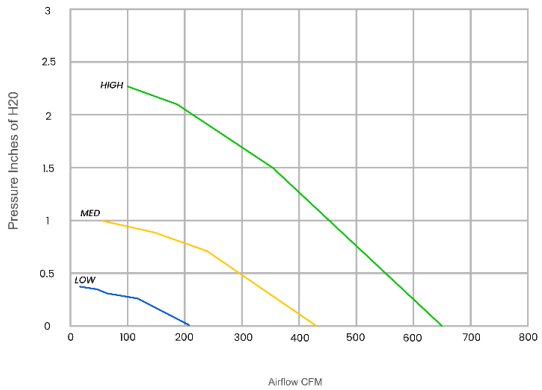


Figure 7. Outdoor fan performance curves

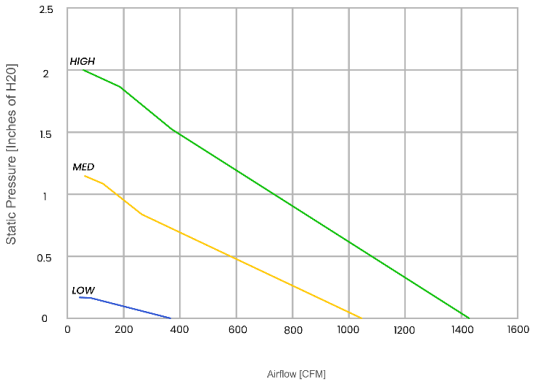
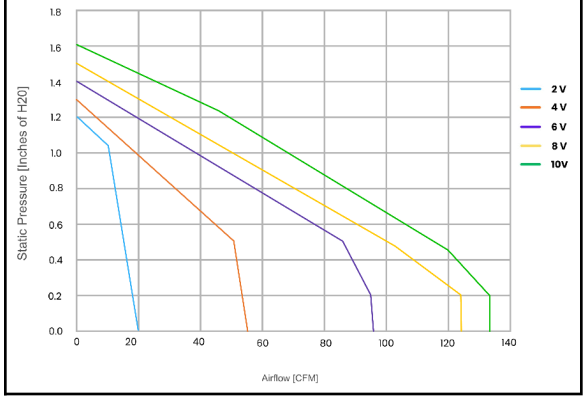


Figure 8. ERV fan performance curves



4. INSTALLATION REQUIREMENTS

Figure 9. Installation



Shared supply and exhaust vents

Shown with plenum adapter for simplified ducting

Supply upper wall - return lower on both sides of the unit

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 Low ambient heating configuration requirement

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

1. Press and hold **Power** for 10 seconds to enter the **User Menu**.
2. Press and hold **+** and **–** simultaneously for 10 seconds to enter the **Installer Menu**.
3. Use **+ / –** to scroll to **HE**, then press **Power**.
4. Use **+ / –** to select **RT**, then press **Power** to save (save icon appears).
5. When returned to the main screen, press **A**, then press **A** again.

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

4.3 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).

4.4 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.

- A power supply with a voltage rating of 60 Hz, single phase, in 115V or 208/230V 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 with a minimum of 2% slope, when an internal drain is used. An internal drain is highly recommended. If using an externally run condensate line, note the following:
  - The line must be properly insulated
  - A minimum of 30% slope.
  - If on a low floor, ensure that the end of the drain is above the maximum height of snow buildup.

- Interior clearances are only required to prevent vibrations. Leave at least 4" (102 mm) of clearance from any surface in addition to any clearance required for servicing the unit. 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.
- Correctly sized ductwork must be installed properly and balanced.
- The unit must be perfectly level on the horizontal axis and perfectly plumb on the vertical axis.
- The unit must be tightly attached to the ducts, with zero leakage between the external ducts and the unit.
- The unit must be properly affixed with screws to wall studs or other supporting material.
- Unblocked vents on the exterior with no obstacles within 40" (1016 mm) of the air intake and discharge.
- An access panel with adequate clearance to be able to access the entire front of the unit for service
- 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.

4.5 Outdoor air louver options

AIO® Vertical Stack XL units accommodate various outdoor air louver designs, including architectural louvers and perforated panels.

Choose one of the following options:

- Use the INNOVA-approved LLA/F-V XL louver, available through your INNOVA distributor.
- Use a custom louver designed with guidance from INNOVA.



Contact INNOVA before selecting, designing, or fabricating a custom louver. An unsuitable louver may restrict airflow, impair unit operation, and affect warranty coverage.

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	24,000	22,000	20,000
	Recommended*		22,000	20,500	18,500
	Rated		20,300	18,300	17,500
	Minimum		4,500	4,500	4,500
Input Power	Maximum	W	2,346	2,450	2,520
	Recommended*		2,045	2,250	2,310
	Rated		1,743	1,956	2,147
	Minimum		341	356	358
Efficiency	Maximum	EER	10.23	8.98	7.94
	Recommended*		10.76	9.11	8.01
	Rated	EER2	11.65	9.36	8.15
	Seasonal	SEER2	13.91	-	-
Moisture Removal		Pts/h	1.9	2.1	2.3
		L/hr	0.9	1.0	1.1

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	24,000	17,500	12,500	9,500	8,200
	Recommended		20,000	11,600	9,300	8,300	7,600
	Rated		17,300	10,400	8,300	7,400	6,800
	Minimum		5,000	4,150	3,850	3,850	3,850
Input Power	Maximum	W	2,340	2,280	2,210	2,375	2,380
	Recomm-ended*		1,800	1,480	1,390	1,400	1,228
	Rated		1,424	1,286	1,210	1,215	1,060
	Minimum		320	345	344	368	400
Efficiency	Maximum	COP	3.01	2.25	1.66	1.17	1.01
	Recomm-ended*		3.26	2.30	1.96	1.74	1.81
	Rated		3.56	2.37	2.01	1.79	1.88
	Minimum		4.58	3.53	3.28	3.07	2.82
	Seasonal	HSPF2	9.12	-	-	-	-

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. 15°F(-9.4°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 heat strips are available for an additional 12,200 BTU/hr of 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	24,000	22,000	20,000
	Recommended*		22,000	20,500	18,500
	Rated		11,600	18,300	17,500
	Minimum		4,500	4,500	4,500
Input Power	Maximum	W	2,346	2,450	2,520
	Recommended*		1,669	2,250	2,310
	Rated		991	1,956	2,147
	Minimum		341	356	358
Efficiency	Maximum	EER	10.23	8.98	7.94
	Recommended*		13.18	9.11	8.01
	Rated	EER2	11.70	9.36	8.15
	Seasonal	SEER2	15.40	-	-
Moisture Removal		Pts/h	1.9	2.1	2.3
		L/hr	0.9	1.0	1.1

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 - Heat pump only

Table 4. Energy star compliant - Heating - Heat Pump Only

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	24,000	17,500	12,500	9,500	8,200
	Recomm-ended*		20,000	11,400	9,200	8,300	7,600
	Rated		14,200	10,200	8,200	7,400	6,800
	Minimum		5,000	4,150	3,850	3,850	3,850
Input Power	Maximum	W	2,340	2,280	2,210	2,375	2,380
	Recomm-ended*		1,800	1,450	1,200	1,400	1,228
	Rated		1,158	1,261	1,045	1,215	1,060
	Minimum		320	345	344	368	400
Efficiency	Maximum	COP	3.01	2.25	1.66	1.20	1.01
	Recomm-ended*		3.26	2.30	2.25	1.74	1.81
	Rated		3.59	2.37	2.30	1.79	1.88
	Minimum		4.58	3.53	3.28	3.07	2.82
	Seasonal	HSPF 2	9.20	-	-	-	-

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. 15°F(-9.4°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 heat strips are available for an additional 12,200 BTU/hr of heating capacity.

5.3 ERV

Table 5. 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

Table 6. ERV

		40 CFM (68 m^3/hr)	60 CFM (102 m^3/hr)	80 CFM (136 m^3/hr)
Efficiency of core in winter	Sensible	81.45%	77.7%	74%
	Latent	81.39%	54.2%	50.4%
Efficiency of core in summer	Sensible	80.64%	76.61%	72.6%
	Latent	80.96%	53.4%	49.32%
Filter	Indoor air	MERV 3 / optional MERV 13		
	Outside air	MERV 13	MERV 13	MERV 13
Leakage	Internal	2.6% at 0.40" WC (99.6 Pa)	2.4% at 0.40" WC (99.6 Pa)	2.2% at 0.40" WC (99.6 Pa)
	External	2.8% at 1.0" WC (249.1 Pa)	2.7% at 1.0" WC (249.1 Pa)	2.5% at 1.0" WC (249.1 Pa)

5.4 Airflow

5.4.1 Indoor

Table 7. Airflow - Indoor

Air volume		
Indoor	Type	ECM centrifugal
	CFM Range	247 - 740
	m^3/hr Range	420- 1257
	Nominal CFM	
	Available ESP at Nominal CFM	-
	Supply connection	Integrated top or side
	Return connection	Integrated top or side
	Speeds	Low, med, high, boost, auto
	Filter	MERV 3 - Optional MERV 13

5.4.2 Outdoor

Table 8. Airflow - Outdoor

Air volume		
Outdoor	Type	ECM centrifugal
	CFM Range	382 - 1110
	m^3/hr Range	649- 1886
	Nominal CFM	
	Available ESP at Nominal CFM	0.7" WC (174.4 Pa)
	Intake and Exhaust Connection	18" x 36" (457 x 914 mm) vent
	Speeds	Low, med, high, auto

5.5 Sound

Table 9. Sound

Sound			
Measurement	Distance	Fan Speed	Sound Level (dB(A))/Rating
Indoor	1 m	Level 1 - Low	44
		Level 2 - Medium	52
		Level 3 - High	54
	3 m	Level 1 - Low	36
		Level 2 - Medium	43
		Level 3 - High	46
Outdoor	-	Range	28 - 55
STC	-	-	27
OITC			19

5.6 General

5.6.1 Controls

Table 10. 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

5.6.2 Modes

Table 11. 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

5.6.3 Condensate

Table 12. General - Condensate

Condensate	
Pipe size	3/4" (19 mm) Outside diameter
Pipe material	Rubber

5.6.4 Physical

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

Table 13. General - Physical

Physical data			
Dimensions		in	23.8 W x 76.3 H x 27.4 D
		mm	605 W x 1937 H x 695 D
Weight	Net	lb	332
		kg	150.6
	Gross	lb	349
		kg	158.3
Cabinet	Finish		Black covered with dark gray EPDM
	Material		Steel

5.6.5 General

Table 14: General - Compressor

Compressor		
Type	BLDC twin rotary inverter	
Refrigerant	Type	R32
	Quantity	45.85 oz.
		1.3 kg
Oil Type	Fv50s (ISO 50)	

5.6.6 Insulation

Table 15: 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.

5.7 Electrical

5.7.1 General

Table 16. Electrical - General

General		High Performance	Energy Star
Volt range		180-253	
Hz/phase		60 Hz / single phase	
Power input connection		LCDI power cord or hardwire	
Power factor		0.96	
Input power (standby)	W	10.8	
Input power (off mode)	W	1.7	
Cooling (nominal)	A	7.6	4.3
Cooling (max)	A	11.2	
Heat Pump Only			
Heating - heat pump only (nom.)	A	8.6	7.4
Heating-heat pump only (max)	A	11.2	
Heat Pump + 3.6 kW Elec Heat			
Heating-heat pump+3,600 W Elec Heat (nom.)	A	24.2	23.1
Heating-heat pump+3,600 W Elec Heat (max)	A	27.0	
Heat Pump + 4.5 kW Elec Heat			
Heating-heat pump+4,500 W Elec Heat (nom.)	A	28.2	27.0
Heating-heat pump+4,500 W Elec Heat (max)	A	31.0	
Heat Pump + 3.6 kW Elec Heat + 1 kW Pre Heat			
Heating-heat pump+3,600 W Elec Heat + 1,000 Pre Heat (nom.)	A	28.6	27.0
Heating-heat pump+3,600 W Elec Heat + 1,000 Pre Heat (max)	A	31.0	
Heat Pump + 4.5 kW Elec Heat + 1 kW Pre Heat			
Heating-heat pump+4,500 W Elec Heat + 1,000 Pre Heat (nom.)	A	32.5	31.3
Heating-heat pump+4,500 W Elec Heat + 1,000 Pre Heat (max)	A	35.0	

Table 17. Electrical - Circuit breakers

Circuit breakers			
Heat Pump Only	MCA	A	14
	MOCP	A	20
Heat Pump + 3600 W Elec Heat	MCA	A	29
	MOCP	A	35
Heat Pump + 4500 W Elec Heat	MCA	A	33
	MOCP	A	39
Heat Pump + 3600 W Elec Heat + 1000 W Pre Heat	MCA		34
	MOCP		39
Heat Pump + 4500 W Elec Heat + 1000 W Pre Heat	MCA	A	37
	MOCP	A	43

5.7.2 Motors

Table 18. Electrical - Motors

Motors			
Compressor	RLA	A	6
	LRA	A	6
Indoor ECM fan motor	Watts (max)	W	425
	FLA	A	2
	Power	HP	1/6
Fresh air intake ECM fan motor	Watts (max)	W	70
	FLA	A	0.5
	Power	HP	1/10
Stale air exhaust ECM fan motor	Watts (max)	W	70
	FLA	A	0.5
	Power	HP	1/10
Outdoor ECM fan motor	Watts (max)	W	405
	FLA	A	1.9
	Power	HP	1/8

5.7.3 LCDI power cords

Table 19. Electrical - LCDI Power cords

LCDI Power Cord		
Heat Pump Only	Amps	15
	Plug	6-15P
Heat Pump + Elec Heat	Amps	30
	Plug Type	6-30P

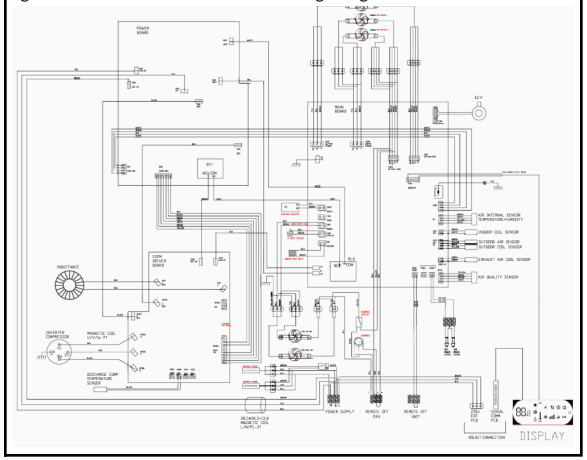
For units requiring a breaker size above 20 A, a quick-connect whip cord is available as an accessory (60" (1524 mm) length).

6. WIRING DIAGRAM

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

AIO Vertical Stack XL with ERV Wiring Diagram (V ...

Figure 10. AIO® Vertical Stack XL wiring diagram



7. DIMENSIONS

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

AIO Vertical Stack XL Dimensions (V 5.0).pdf

Figure 11. AIO® Vertical Stack XL dimensions (top view)

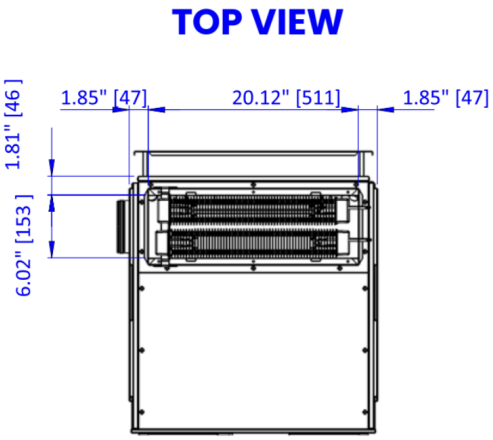


Figure 12. AIO® Vertical Stack XL dimensions (front view)

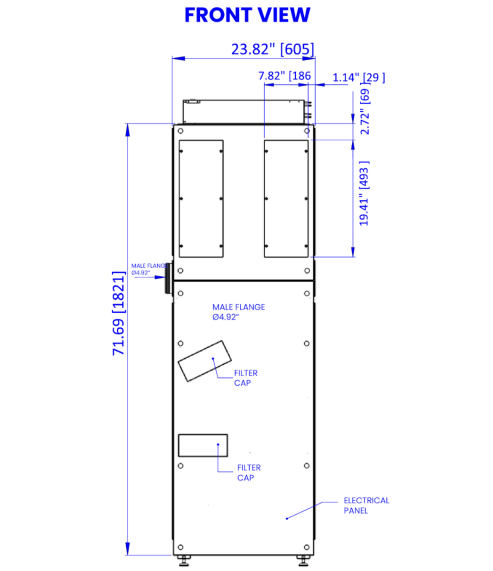


Figure 13. AIO® Vertical Stack XL dimensions (right view)

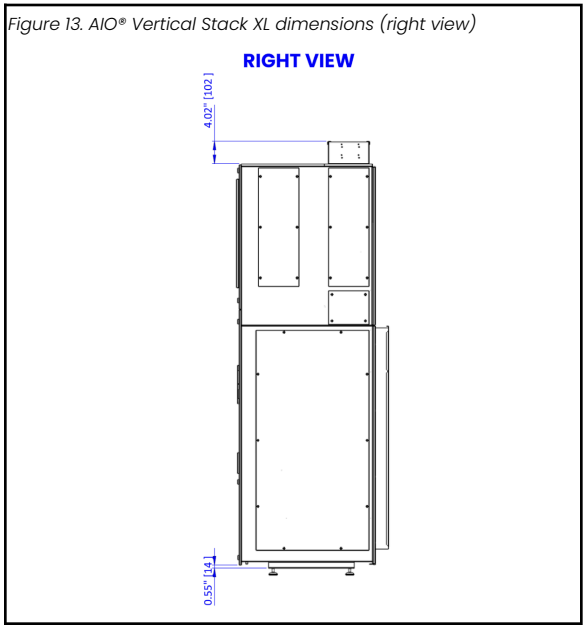


Figure 14. AIO® Vertical Stack XL dimensions (rear view)

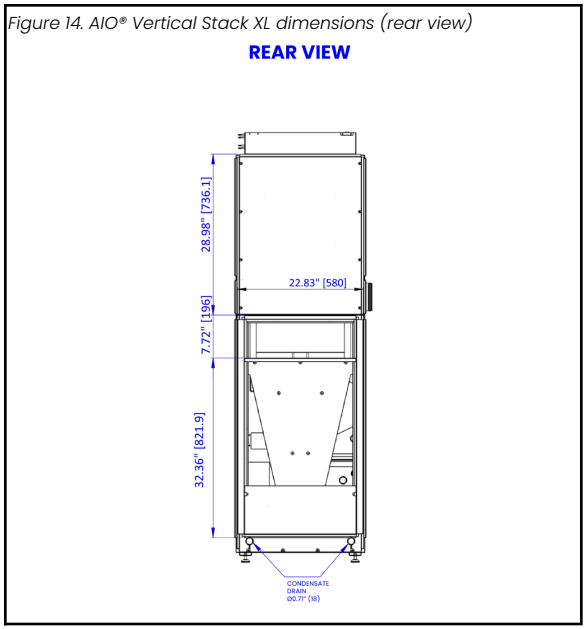


Figure 15. AIO® Vertical Stack XL dimensions (left view)

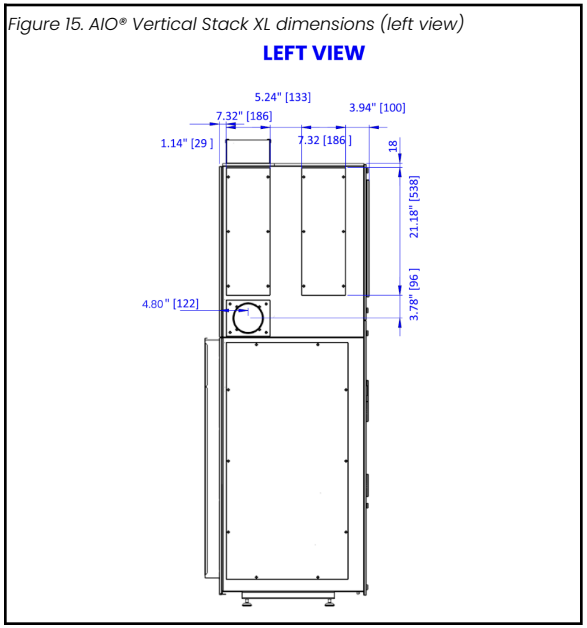
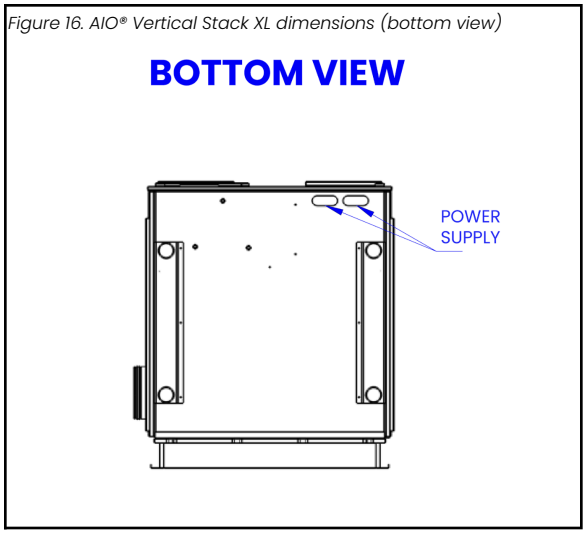


Figure 16. AIO® Vertical Stack XL dimensions (bottom view)



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 230V Heat Pump Only - High Performance

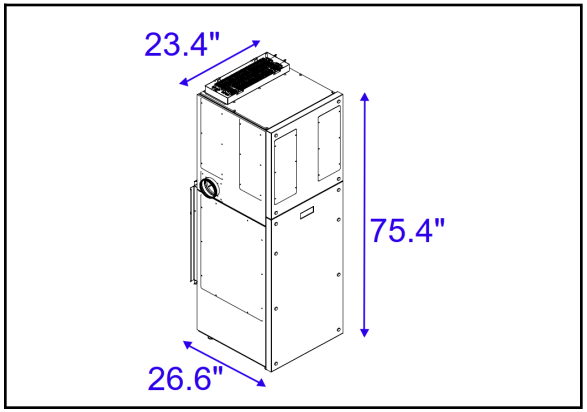
AIO® VERTICAL STACK XL + ERV - High Performance - 230V - NO ELECTRIC HEAT - R32 - SUBMITTAL (AXP20R3H2)

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
- Onboard touch controller
- Integrated ERV
- Washable filter
- Electronically controlled air louver
- Compact, slim design
- 4 selectable fan speeds + Auto
- 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	4,500 - 24,000
	Rated capacity (95°F [35°C])		20,300
	Efficiency	EER2	11.65
Heating	Min-Max	BTU/H	5,000 - 24,000
	Rated capacity (47°F [8.3°C])		17,300
	Rated capacity (5°F [-15°C])		8,300
	Efficiency	COP	3.56
Sound	Indoor: Low-High at 1 m distance	db(A)	44 - 54
	Indoor: Low-High at 3 m distance		36 - 46
	Outdoor sound range		28 - 55
Moisture removal		Pts/h	1.9
		L/hr	0.9
Airflow	Indoor	CFM	247 - 740
		m^3/hr	420- 1257
	Outdoor	CFM	382 - 1110
		m^3/hr	649 - 1886

Electric Specifications	
Power Supply	230V/1Ph/60Hz
Voltage Range	180 - 253
Running Amps Cooling	7.6
Running Amps Heating	8.6
MCA	14
Maximum Overcurrent Protection (A)	20
Max Power Input (amps) Cooling	11.2
Max Power Input (amps) Heating	11.2

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	Amps	NEMA	SKU
☐	89 in. (2260.6 mm)	15	6-15P	L259A

9.2 230V Heat Pump + 3.6 kW Elec Heat - High Performance

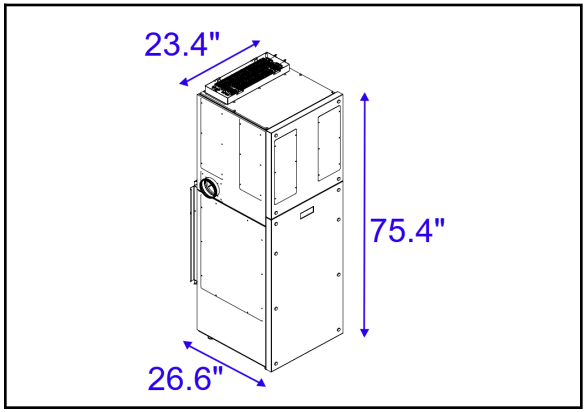
AIO® VERTICAL STACK XL + ERV - High Performance - 230V - 3,600W ELECTRIC HEAT STRIP - R32 -SUBMITTAL (AXM20R3H2)

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
- R32 Refrigerant
- Electric resistance heat supplements with total output of 3,600W
- Auto restart
- Intelligent defrost
- No outdoor unit
- Onboard touch controller
- Integrated ERV
- Washable filter
- Compact, slim design
- 4 selectable fan speeds + Auto
- 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	4,500 - 24,000
	Rated capacity (95°F [35°C])		20,300
	Efficiency	EER2	11.65
Heating	Min-Max	BTU/H	5,000 - 24,000
	Rated capacity (47°F [8.3°C])		17,300
	Rated capacity (5°F [-15°C])		8,300
	Efficiency	COP	3.56
Sound	Indoor: Low-High at 1 m distance	db(A)	44 - 54
	Indoor: Low-High at 3 m distance		36 - 46
	Outdoor sound range		28 - 55
Moisture removal		Pts/h	1.9
		L/hr	0.9
Airflow	Indoor	CFM	247 - 740
		m^3/hr	420- 1257
	Outdoor	CFM	382 - 1110
		m^3/hr	649 - 1886

Electric Specifications	
Power Supply	230V/1Ph/60Hz
Voltage Range	180 - 253
Running Amps Cooling	7.6
Running Amps Heating	24.2
MCA	29
Maximum Overcurrent Protection (A)	35
Max Power Input (amps) Cooling	11.2
Max Power Input (amps) Heating	27

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	Amps	NEMA	SKU
☐	Whip Cord Only	-		W226A

9.3 230V Heat Pump + 4.5 kW Elec Heat - High Performance

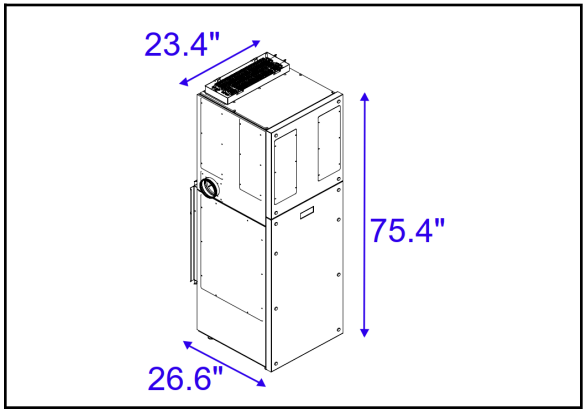
AIO® VERTICAL STACK XL + ERV - High Performance - 230V - 4,500W ELECTRIC HEAT STRIP - R32 -SUBMITTAL (AXT20R3H2)

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
- R32 Refrigerant
- Electric resistance heat supplements with total output of 4,500W
- Auto restart
- Intelligent defrost
- No outdoor unit
- Onboard touch controller
- Integrated ERV
- Washable filter
- Compact, slim design
- 4 selectable fan speeds + Auto
- 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	4,500 - 24,000
	Rated capacity (95°F [35°C])		20,300
	Efficiency	EER2	11.65
Heating	Min-Max	BTU/H	5,000 - 24,000
	Rated capacity (47°F [8.3°C])		17,300
	Rated capacity (5°F [-15°C])		8,300
	Efficiency	COP	3.56
Sound	Indoor: Low-High at 1 m distance	db(A)	44 - 54
	Indoor: Low-High at 3 m distance		36 - 46
	Outdoor sound range		28 - 55
Moisture removal		Pts/h	1.9
		L/hr	0.9
Airflow	Indoor	CFM	247 - 740
		m^3/hr	420- 1257
	Outdoor	CFM	382 - 1110
		m^3/hr	649 - 1886

Electric Specifications	
Power Supply	230V/1Ph/60Hz
Voltage Range	180 - 253
Running Amps Cooling	7.6
Running Amps Heating	28
MCA	33
Maximum Overcurrent Protection (A)	39
Max Power Input (amps) Cooling	11.2
Max Power Input (amps) Heating	31

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	Amps	NEMA	SKU
☐	Whip Cord Only	-		W226A

9.4 230V Heat Pump + 4.5 kW Elec Heat + 1kW Preheat - High Performance

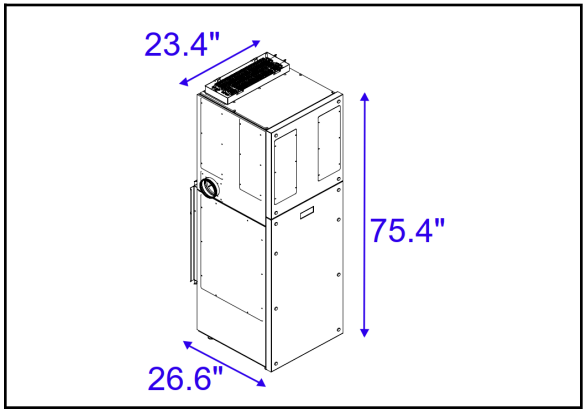
AIO® VERTICAL STACK XL + ERV - High Performance - 230V - 4,500W ELECTRIC HEAT STRIP + 1,000W PREHEATER - R32 -SUBMITTAL (AXY20R3H2)

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
- R32 Refrigerant
- Electric resistance heat supplements with total output of 4,500W
- Additional 1,000W heater to preheat the air entering the ERV
- Intelligent defrost
- No outdoor unit
- Onboard touch controller
- Integrated ERV
- Washable filter
- Compact, slim design
- 4 selectable fan speeds + Auto
- 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	4,500 - 24,000
	Rated capacity (95°F [35°C])		20,300
	Efficiency	EER2	11.65
Heating	Min-Max	BTU/H	5,000 - 24,000
	Rated capacity (47°F [8.3°C])		17,300
	Rated capacity (5°F [-15°C])		8,300
	Efficiency	COP	3.56
Sound	Indoor: Low-High at 1 m distance	db(A)	44 - 54
	Indoor: Low-High at 3 m distance		36 - 46
	Outdoor sound range		28 - 55
Moisture removal		Pts/h	1.9
		L/hr	0.9
Airflow	Indoor	CFM	247 - 740
		m^3/hr	420- 1257
	Outdoor	CFM	382 - 1110
		m^3/hr	649 - 1886

Electric Specifications	
Power Supply	230V/1Ph/60Hz
Voltage Range	180 - 253
Running Amps Cooling	7.6
Running Amps Heating	33
MCA	37
Maximum Overcurrent Protection (A)	43
Max Power Input (amps) Cooling	11.2
Max Power Input (amps) Heating	35

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	Amps	NEMA	SKU
☐	Whip Cord Only	-		W226A

9.5 230V Heat Pump Only - Energy Star Compliant

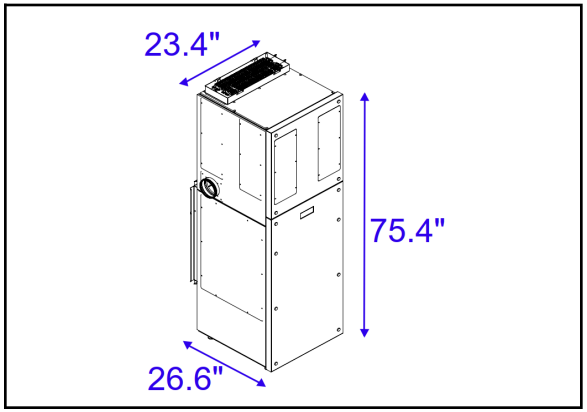
AIO® VERTICAL STACK XL + ERV - Energy Star Compliant - 230V - NO ELECTRIC HEAT - R32 - SUBMITTAL (AXP19R3H2)

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
- R32 Refrigerant
- Auto restart
- Intelligent defrost
- No outdoor unit
- Onboard touch controller
- Integrated ERV
- Washable filter
- Electronically controlled air louver
- Compact, slim design
- 4 selectable fan speeds + Auto
- 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	4,500 - 24,000
	Rated capacity (95°F [35°C])		11,600
	Efficiency	EER2	11.7
Heating	Min-Max	BTU/H	5,000 - 24,000
	Rated capacity (47°F [8.3°C])		14,200
	Rated capacity (5°F [-15°C])		8,200
	Efficiency	COP	3.59
Sound	Indoor: Low-High at 1 m distance	db(A)	44 - 54
	Indoor: Low-High at 3 m distance		36 - 46
	Outdoor sound range		28 - 55
Moisture removal		Pts/h	1.9
		L/hr	0.9
Airflow	Indoor	CFM	247 - 740
		m^3/hr	420- 1257
	Outdoor	CFM	382 - 1110
		m^3/hr	649 - 1886

Electric Specifications	
Power Supply	230V/1Ph/60Hz
Voltage Range	180 - 253
Running Amps Cooling	4.3
Running Amps Heating	7.4
MCA	14
Maximum Overcurrent Protection (A)	20
Max Power Input (amps) Cooling	11.2
Max Power Input (amps) Heating	11.2

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	Amps	NEMA	SKU
☐	89 in. (2260.6 mm)	15	6-15P	L259A

9.6 230V Heat Pump + 3.6 kW Elec Heat - Energy Star Compliant

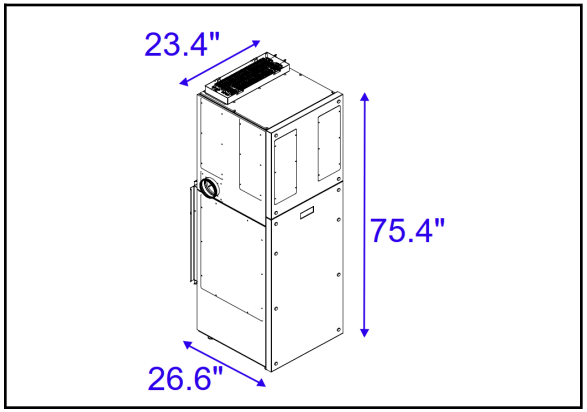
AIO® VERTICAL STACK XL + ERV - Energy Star Compliant - 230V - 3,600W ELECTRIC HEAT STRIP - R32 -SUBMITTAL (AXM19R3H2)

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
- R32 Refrigerant
- Electric resistance heat supplements with total output of 3,600W
- Auto restart
- Intelligent defrost
- No outdoor unit
- Onboard touch controller
- Integrated ERV
- Washable filter
- Compact, slim design
- 4 selectable fan speeds + Auto
- 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	4,500 - 24,000
	Rated capacity (95°F [35°C])		11,600
	Efficiency	EER2	11.7
Heating	Min-Max	BTU/H	5,000 - 24,000
	Rated capacity (47°F [8.3°C])		14,200
	Rated capacity (5°F [-15°C])		8,200
	Efficiency	COP	3.59
Sound	Indoor: Low-High at 1 m distance	db(A)	44 - 54
	Indoor: Low-High at 3 m distance		36 - 46
	Outdoor sound range		28 - 55
Moisture removal		Pts/h	1.9
		L/hr	0.9
Airflow	Indoor	CFM	247 - 740
		m^3/hr	420- 1257
	Outdoor	CFM	382 - 1110
		m^3/hr	649 - 1886

Electric Specifications	
Power Supply	230V/1Ph/60Hz
Voltage Range	180 - 253
Running Amps Cooling	4.3
Running Amps Heating	23.1
MCA	29
Maximum Overcurrent Protection (A)	35
Max Power Input (amps) Cooling	11.2
Max Power Input (amps) Heating	27

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	Amps	NEMA	SKU
☐	Whip Cord Only	-		W226A

9.7 230V Heat Pump + 4.5 kW Elec Heat - Energy Star Compliant

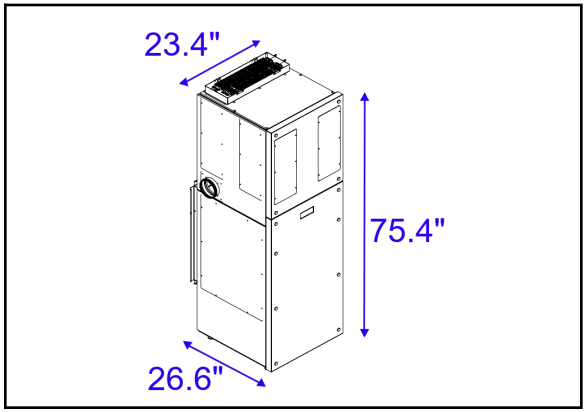
AIO® VERTICAL STACK XL + ERV - Energy Star Compliant - 230V - 4,500W ELECTRIC HEAT STRIP - R32 -SUBMITTAL (AXT19R3H2)

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
- R32 Refrigerant
- Electric resistance heat supplements with total output of 4,500W
- Auto restart
- Intelligent defrost
- No outdoor unit
- Onboard touch controller
- Integrated ERV
- Washable filter
- Compact, slim design
- 4 selectable fan speeds + Auto
- 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	4,500 - 24,000
	Rated capacity (95°F [35°C])		20,300
	Efficiency	EER2	11.65
Heating	Min-Max	BTU/H	5,000 - 24,000
	Rated capacity (47°F [8.3°C])		17,300
	Rated capacity (5°F [-15°C])		8,300
	Efficiency	COP	3.56
Sound	Indoor: Low-High at 1 m distance	db(A)	44 - 54
	Indoor: Low-High at 3 m distance		36 - 46
	Outdoor sound range		28 - 55
Moisture removal		Pts/h	1.9
		L/hr	0.9
Airflow	Indoor	CFM	247 - 740
		m^3/hr	420- 1257
	Outdoor	CFM	382 - 1110
		m^3/hr	649 - 1886

Electric Specifications	
Power Supply	230V/1Ph/60Hz
Voltage Range	180 - 253
Running Amps Cooling	7.6
Running Amps Heating	28
MCA	33
Maximum Overcurrent Protection (A)	39
Max Power Input (amps) Cooling	11.2
Max Power Input (amps) Heating	31

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	Amps	NEMA	SKU
☐	Whip Cord Only	-		W226A

9.8 230V Heat Pump + 4.5 kW Elec Heat + 1kW Preheat - Energy Star Compliant

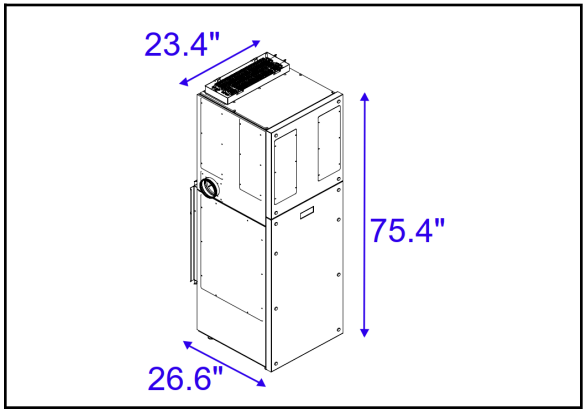
AIO® VERTICAL STACK XL + ERV - Energy Star Compliant - 230V - 4,500W ELECTRIC HEAT STRIP + 1,000W PREHEATER - R32 -SUBMITTAL (AXY19R3H2)

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
- R32 Refrigerant
- Electric resistance heat supplements with total output of 4,500W
- Additional 1,000W heater to preheat the air entering the ERV
- Intelligent defrost
- No outdoor unit
- Onboard touch controller
- Integrated ERV
- Washable filter
- Compact, slim design
- 4 selectable fan speeds + Auto
- 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	4,500 - 24,000
	Rated capacity (95°F [35°C])		20,300
	Efficiency	EER2	11.65
Heating	Min-Max	BTU/H	5,000 - 24,000
	Rated capacity (47°F [8.3°C])		17,300
	Rated capacity (5°F [-15°C])		8,300
	Efficiency	COP	3.56
Sound	Indoor: Low-High at 1 m distance	db(A)	44 - 54
	Indoor: Low-High at 3 m distance		36 - 46
	Outdoor sound range		28 - 55
Moisture removal		Pts/h	1.9
		L/hr	0.9
Airflow	Indoor	CFM	247 - 740
		m^3/hr	420- 1257
	Outdoor	CFM	382 - 1110
		m^3/hr	649 - 1886

Electric Specifications	
Power Supply	230V/1Ph/60Hz
Voltage Range	180 - 253
Running Amps Cooling	7.6
Running Amps Heating	33
MCA	37
Maximum Overcurrent Protection (A)	43
Max Power Input (amps) Cooling	11.2
Max Power Input (amps) Heating	35

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	Amps	NEMA	SKU
☐	Whip Cord Only	-		W226A

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

© 2026 INNOVA. All rights reserved.

Revised September 23, 2026

AIO® Vertical Stack XL with ERV **Product Data Sheet**