



## Advantage Air-to-Water Heat Pump



### PRODUCT OVERVIEW

A turnkey solution, bringing modern heating and cooling capabilities to life. The first complete air-source solution to offer radiant heating, up to 100% of domestic hot water heating, and forced air heating and cooling, all with high-efficiencies, utility cost-savings, and capabilities for net zero status. The Advantage uses a Monobloc design, which eliminates the need for refrigerant lines between the outdoor and indoor units, resulting in greater ease of installation and service, as well as increased reliability. With its variable-speed vapor injection scroll compressor, the unit produces heat in extreme cold temperatures (down to  $-13^{\circ}\text{F}$  or  $-25^{\circ}\text{C}$ ), which surpasses traditional air-source systems.



# The first packaged solution to provide:



Up to 100% of domestic hot water needs



Radiant in-floor heating



Forced-air heating and cooling functionality

## Benefits for Owners

Each system feature was designed with the contractor and home or building owner in mind. Here's what each means for the owner of the system:

**SAVE TIME:** System features like the Monobloc design, large LCD control screen, pre-installed internal expansion tank, included internal flush blocks, internal bypass valve, and Vortex Flow Sensor were intentionally included to save installers and service technicians time on initial installation, ongoing, preventative maintenance, and in the event of an issue, save time on a service call. This creates the opportunity for owners to experience lower installation and labor costs when compared to a traditional air-source system.

**SAVE MONEY:** This system's ability to transfer heat using water makes it more efficient than a standard air-to-air system. Features like the ECM fan, inverter-driven technology and variable-speed compressor, variable-speed internal circulating pump all work together to create energy-efficient,

cost-saving operation so owners use less energy and save money on heating, cooling, and hot water costs.

**SYSTEM MONITORING:** Get details on system performance, and monitor energy usage anywhere, at any time (coming in 2021). Features including system monitoring and the large LCD control screen create the opportunity for owners and installers alike to stay connected, so each is always in control and aware of performance. If an issue arises, contractors can diagnose before coming on-site with cloud connectivity, ensuring proper time is allotted for service and the right equipment to fix the problem arrives onsite.

**STAY COMFORTABLE:** The Advantage was created to offer consistent, even temperatures throughout the spaces it conditions.

The refrigerant heated condensate pan, temperature sensors and pressure transducers, inverter-driven technology and variable-speed compressor, and electric backup and auxiliary heat work together to offer the highest level of comfort, no matter the conditions outside.

**SAFETY:** All refrigerant lines are within the outdoor unit, eliminating any indoor refrigerant lines, common with most air-source heat pumps. And, if it makes sense for the project, the Advantage doesn't require fossil fuels to operate, which can eliminate the chance of combustion or harmful fuel leaks. But, if all-electric isn't feasible, Enertech has an option available for a backup boiler or furnace, which is helpful in areas with special dual-fuel utility rates.

## Warranty



Our warranty is here to assist if the need arises. The standard warranty includes three years for all parts with seven years for the compressor, and a 90 day out-of-the-box assurance. Discuss warranty options with the installer for a full explanation of coverage, please register the system, and double-check coverage online using the serial number within 60 days of installation.

# Product Features

## System Monitoring

Connected controls through cloud-based system

Allows for remote access to monitor running conditions and diagnose any potential issues prior to arriving on-site.

## ECM Fan

Provides high efficiencies, whisper quiet operations to reduce outdoor noise, and contributes to higher efficiencies for utility cost-savings.

## Variable-Speed Internal Circulating Pump

Provides higher efficiencies for lower utility costs.

## Large LCD Control Screen

Find system and diagnostic information for both units on the LCD control screen located on the indoor unit. The easy-to-read high-mounted screen displays settings, diagnostics, and running conditions for easier performance or maintenance-type service.

## Electric Backup and Auxiliary Heat

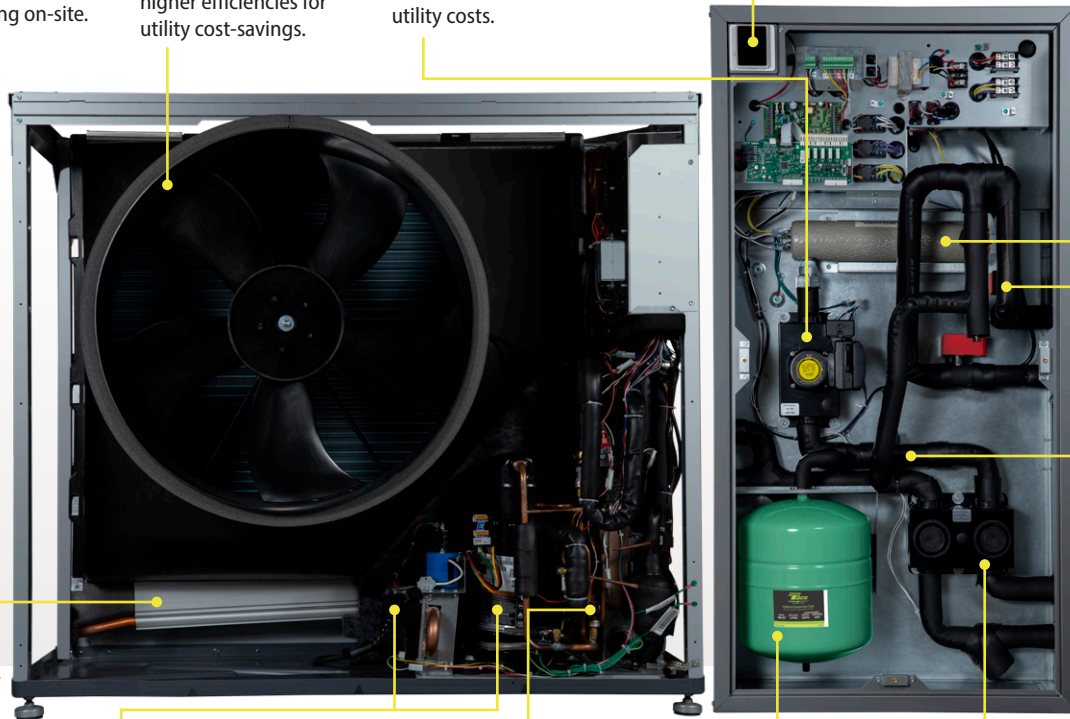
9kW electric immersion heater for increased capacities at extreme temperatures or dual fuel option.

## Refrigerant Heated Condensate Pan

Ensures moisture continually flows, even in below freezing temperatures for a high-performing, reliable system.

## Internal Bypass Valve

Offers installation time savings, labor savings, and lends to ease of installation.



OUTDOOR UNIT

INDOOR MODULE

## Inverter-Driven Technology and Vapor Injection, Variable-Speed Compressor

Offers higher efficiencies and varying capacities for lower utility costs. Vapor injection allows extended operation with very high efficiencies and capacities, even down to -13° F.

## Temperature Sensors and Pressure Transducers

Allows for optimum water temperatures at all times to ensure the highest efficiencies while eliminating temperature swings, displaying the information on the control screen. With these being factory-installed, service time for an on-site technician is reduced with refrigerant gauges and thermocouple meter no longer needed.

## Pre-Installed Internal Expansion Tank

Located within the indoor unit for installation time-and labor-savings

## Included Internal Flush Blocks

Installer can connect directly to the flush block to do any purging of air or adding of liquid to save time on installation and any possible service or maintenance needs.

## Vortex Flow Sensor

Allows for labor time-savings at installation and during maintenance or service. This is pre-installed to help regulate water flow, and readings are displayed on control screen for quick reading in GPM (gallons per minute).

## Monobloc Design

Compact, pre-assembled system with zero refrigerant lines outside of system. Only water lines run from outdoor to indoor unit. No field refrigerant piping needed AND no refrigerant inside the building.

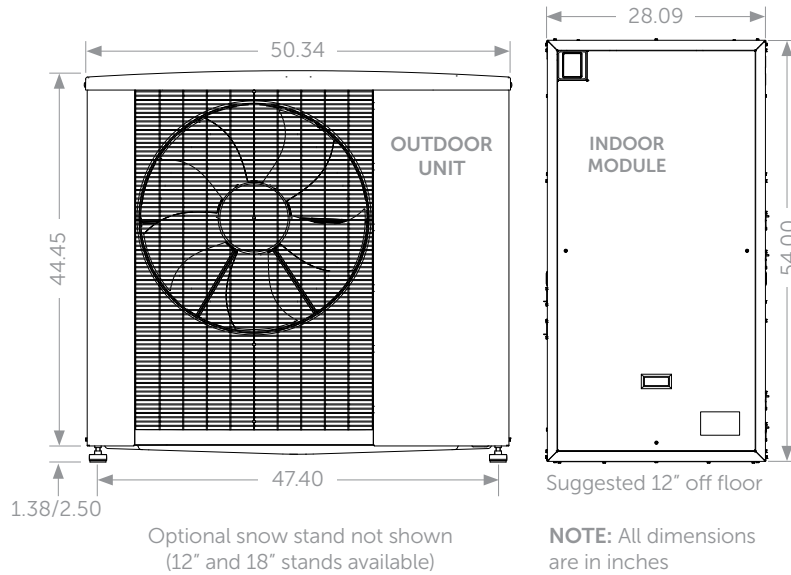
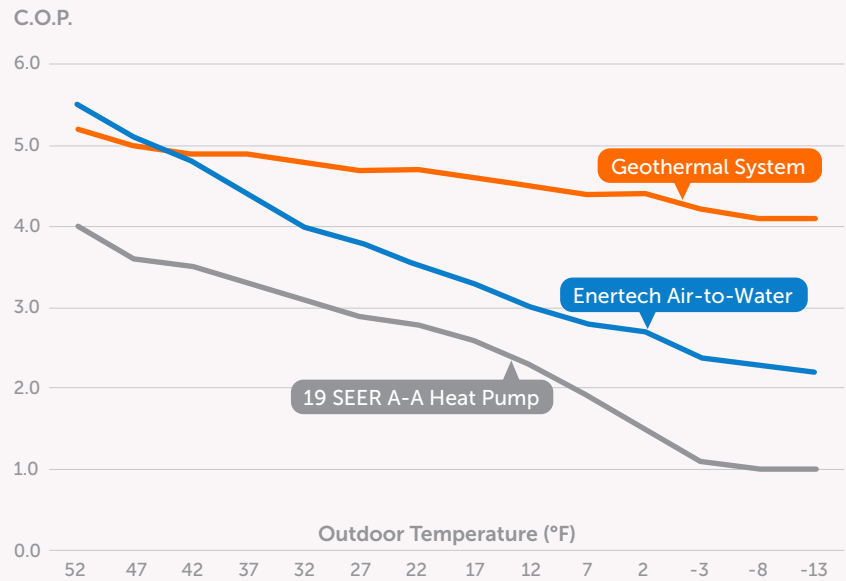
## Capacity and Efficiency Ratings

Model	Full Load Heating Capacity (MBTUH)	Full Load COP at 47°F	Full Load COP at 17°F	Full Load Cooling Capacity (MBTUH)	IPLV	NPLV
AV030	31.3	5.12	3.24	19.8	17.8	21.2
AV060	55.0	4.83	3.44	37.9	16.6	18.6



**Electric-powered and energy-efficient, pairing well with a solar PV system.**

# Efficiency Comparison (COP)



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