



# Trane® Axiom™

Water-Source Heat Pumps



## A heat-pump system to meet the needs of virtually any building.

With one of the broadest portfolios of heat-pump systems of any manufacturer, Trane® has a water-source heat pump system to meet the needs of virtually any building—and deliver efficient performance.

That performance can be optimized by using Tracer™ system and unit controls, which are factory-programmed to maximize both comfort and energy savings—unlike competing systems' controllers, which rarely take full advantage of a system's key performance parameters.

In a Trane water-source heat pump system, one of the most important measures of performance is efficient operation—which is why we're proud that our top-performing variable-speed water-source heat pump units can reach up to 40 EER and save up to 60 percent on energy costs.

Performance, efficiency and a wide variety of configurations. It's a combination that's a perfect fit for nearly any building... including yours.

### The Right Fit, the Right Performance

Every building should have an HVAC system that delivers maximum comfort and efficiency without compromise. Which is why Trane maintains a lineup of water-source heat pump systems with a wide variety of configurations and designs to ensure compatibility and performance. Vertical, horizontal, rooftop and console installations are supported, as well as buildings with either three-phase or single-phase electrical service. Regardless of the configuration, every Trane system is built to provide dependable performance day after day, year after year.

### The Integrated Controls Advantage

A heat pump system can be engineered, built and installed to deliver exceptional performance and efficiency...but unless that system's controls are designed to take full advantage of its benefits, the system may never deliver its full potential.

Only Trane® Axiom™ water-source heat pump systems are available with unit controllers containing Trane programming, which optimize both performance and efficiency under all operating conditions. These exclusive Tracer™ controllers offer a level of system integration that can't be matched by third-party controllers.

Pre-programmed operating parameters can get the entire heat pump system up and running quickly—and once online, a Tracer™ SC system controller continuously monitors building information and communicates with individual unit controllers to deliver the best possible levels of comfort, cost savings and convenience, too—because the Tracer SC system can be managed from either a single internal point or even via the Web.

### Trane Air-Fi™ Wireless Systems

Trane Air-Fi wireless systems provide significant advantages to meet customer needs by providing a lower initial cost; ease of installation for reduced risk; increased reliability and flexibility for easier problem solving; and fewer maintenance issues for worry-free operation and cost savings over the life of the system. Trane Air-Fi wireless systems help save time and money with industry-leading technology and performance.

## At a Glance: Trane Water-Source Heat Pump System Benefits

### Available eFlex™ Variable-Speed Technology –

Trane Axiom water-source heat pump systems with eFlex™ technology can provide superior comfort while dramatically reducing energy costs. Trane eFlex variable-speed technology allows the compressor and fan to operate at reduced speeds to match demand, minimizing on/off cycling, temperature swings, noise and energy use. Axiom water-source heat pump systems with eFlex technology are among the most efficient available, and can save up to 60 percent in energy costs compared to older systems.

**Exceptional Efficiency** – Trane Axiom water-source heat pump systems with eFlex technology can reach up to 40 EER which can help lower your utility bills.

### eStage™ Technology for Two Stage Compressors –

Trane eStage compressor control technology utilizes differently sized, fixed-speed compressors which operate on a single circuit. Programmed with intelligent staging algorithms, eStage strategically controls the operation of the compressors; it garners significant improvements in full load (EER) and part-load (IEER) efficiencies.

### Available Integrated Tracer SC System Controls –

Many competing heat pump systems rely on generic controllers made by third-party suppliers. Generic controllers lack specific algorithms tuned to the unique performance and efficiency parameters of a heat pump system; the result is that performance and efficiency rarely can be optimized. Only a Tracer SC system control contains Trane-developed algorithms specifically designed to maximize the performance and efficiency of your Trane heat pump system.

**Improved Comfort** – Trane water-source heat pumps are available with technologies to maximize indoor comfort by removing airborne contaminants, reducing humidity and minimizing system noise.

**Large System Portfolio** – With the wide Trane portfolio of different water-source heat pump system designs, there's sure to be a system that will fit your building and provide the performance and efficiency you expect and deserve.

**Multi-Room Heating and Cooling** – Trane water-source heat pump systems are the perfect choice for locations that require unique heating and cooling needs for different rooms, because they can simultaneously heat and cool multiple rooms in the same building. A heat-recovery process can transfer excess heat from where it's not needed to where it is, increasing overall system efficiency.

## The wide portfolio of Trane® Axiom™ water-source heat pumps.

The full portfolio of Trane® Axiom™ water-source heat pumps can serve the needs of nearly any building. Below are the many different types of Trane water-source heat pumps that are available and the types of buildings they can best serve.



### Console GEC

- Size range: 1/2 - 11/2 tons
- Console configuration installed within the occupied space in a ductless application



### Water-to-Water EXW

- Size range: 5 - 20 tons
- Provides cold or warm water on-demand for radiant heating (and/or cooling) systems, air handling units, or heating service water



### Variable-Speed VSHV

- Size range: 2 - 5 tons
- Premium efficiency
- Horizontal and vertical configurations
- eFlex™ compressor and fan technology varies capacity as the load changes



### Vertical Stack GET

- Size range: 3/4 - 3 tons
- Vertical stack configuration for multi-story applications



### Rooftop GWS

- Size range: 3 - 10 tons
- Rooftop configuration for outdoor installation



### Midrange & Large GEHV

- Size range: 6 - 25 tons
- Horizontal and vertical configurations
- Ideal for heating and cooling large zones



### 1/2 - 5 Ton GEHV

- Size range: 1/2 - 5 tons
- Single stage compressor with ECM
- Horizontal and vertical configurations
- Energy efficient and quiet operation



### High-Efficiency EXHV

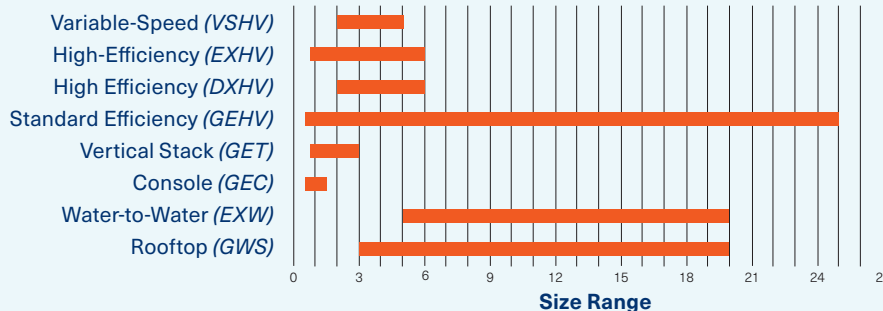
- Size range: 3/4 - 6 tons
- Single stage compressor with ECM
- Horizontal and vertical configurations
- Higher efficiency performance for greater energy savings



### High-Efficiency DXHV

- Size range: 2 - 6 tons
- eStage™ 2-stage compressor technology with ECM
- Horizontal and vertical configurations
- Higher efficiency performance for greater energy savings

Trane's Axiom™ WSHP offering is one of the broadest offerings in the market, including eight product models with unit and system level controls



## The Trane® commitment never varies.

### Support for Efficient Technologies

Trane® has a long history of support for the most efficient and proven technologies available.

Our water-source heat pump systems continue this legacy by being fully compatible with geothermal technology—a technology that has demonstrated its ability to greatly reduce operating energy costs and contribute toward environmental sustainability in the long term.

### Exceptional Reliability and Service

If there's one reason why those who specify Trane equipment once specify it again and again, it's the unvarying Trane commitment to its customers for the life of the product. From the first day of installation through every day of operation, your Trane product's reliable, economical performance reflects on us. We're proud of our products. We want you to be proud of them, too.

### A Solution We Will Find Together

The singular success of your new Trane® system is built on a foundation that is the expertise and hard work of hundreds of people. These people—the experts at Trane—are committed to helping you design, engineer, install and maintain the ideal system for your specific application. Because every application is unique. Every building is unique. And, most importantly, every customer is unique. So when you partner with Trane to develop a solution to your HVAC needs, know that we're committed to analyzing your needs. And then, together, we will find the right solution for your needs—and for the needs of your building and the lives within it.

## SUCCESS STORY

### University of Central Missouri—Water-Source Heat Pump

In the spring of 2009, the University of Central Missouri (UCM) embarked on a \$36.1 million energy savings contract with Trane.

#### The project included:

- Installation of 150 geothermal wells
- Replacement of the outdated, unsightly power plant and boiler system with a green, sustainable geothermal heat pump system
- Improvement of air handling systems and acoustical qualities
- Laboratory air systems and controls
- Life safety measures
- A campus-wide building automation system to effectively manage energy use

An innovative feature of the Trane package includes “green screens” throughout the campus to educate the faculty, students and the community on the University's sustainability initiatives—and learn what they can do to make a difference and get involved in efforts toward becoming a carbon-neutral campus.

Construction was scheduled to last through the spring of 2011, but the project was completed six months ahead of schedule. UCM now has a sustainable, high-performance campus and will see \$735,000 in annualized consumption savings, \$848,000 in operating and maintenance savings, and \$1.5 million in avoided annual capital improvements.

*“Trane went the extra mile and truly evaluated all of the opportunities. Their proposal was one of the most thorough responses I've ever seen.”*

Dr. Betty Roberts  
UCM Vice President for Administration and Finance

Learn more at [trane.com](http://trane.com)



Trane – by Trane Technologies (NYSE: TT), a global climate innovator – creates comfortable, energy efficient indoor environments through a broad portfolio of heating, ventilating and air conditioning systems and controls, services, parts and supply. For more information, please visit [trane.com](http://trane.com) or [tranetechnologies.com](http://tranetechnologies.com).

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WSHP-SLB039-EN  
01/12/2023