Trane® Axiom™ Variable-Speed Water-Source Heat Pumps
Energy savings you can measure. Comfort you can feel.

Control, comfort and cost-saving operation: that’s what you can expect from a Trane® variable-speed water-source heat pump system.

Compared to conventional heat pump systems, a Trane variable-speed system can provide superior comfort while providing energy savings up to 60 percent. Its eFlex™ compressor and fan can change speeds to match the load requirements of the space, saving energy without sacrificing comfort. In fact, occupant comfort can be improved due to the more consistent temperatures and quieter operation that variable-speed technology can provide.

Setting the Trane Axiom™ variable-speed water-source heat pump apart from any other is the performance and efficiency characteristics for energy savings you can measure ... and comfort you can feel.

Variable-Speed Technology: Energy Savings and More

Trane variable-speed water-source heat pumps offer exceptional efficiency at full speed and full load. With the ability to reach up to 40 EER, a Trane variable-speed water-source heat pump system can provide energy savings up to 60 percent when compared to a conventional water-source heat pump system. (See chart on previous page.)

Variable-speed technology also increases system reliability by minimizing on/off cycling, which greatly reduces wear and tear on the Trane eFlex variable-speed compressor and fan. Most importantly, Trane variable-speed technology improves occupant comfort. As cooling or heating demand decreases, the heat pump system operates at reduced speeds to maintain precise space temperature control. And for fast, efficient removal of excess humidity, an enhanced dehumidification control sequence optimizes the fan and compressor speed ratio to draw moisture from indoor air.

Controls and Automation: an Integrated Solution

Trane variable-speed water-source heat pump systems are available with Tracer™ UC400 with integrated unit controllers, pre-programmed with Trane-developed algorithms to take full advantage of the Trane eFlex variable-speed compressor and fan. This allows customization of cycling modes, airflow parameters and more. Individual unit controllers can communicate with the Tracer SC intelligent field panel, which can continuously monitor building information and coordinate the operation of the entire heat pump system for optimized system control.

Trane variable-speed water-source heat pump systems can be a perfect fit for the heating and cooling needs of a variety of building types, including those used by educational institutions, businesses and government entities.

Integrated Control and Automated System Capability – Available factory programmed Tracer UC-400 controls use Trane-developed algorithms to maximize the performance and energy efficiency benefits of the Trane eFlex variable-speed compressors and fans.

Superior Indoor Comfort – Trane eFlex variable-speed technology gradually changes compressor and fan speed, which reduces temperature swings and ensures quiet operation.

Efficiency and Sustainability – Variable-speed technology brings the energy-saving design of water-source heat pumps to new levels of efficiency, which is good for your budget—and the planet.

First and Best – Trane was the first manufacturer to offer an AHRI-certified variable-speed water-source heat pump—and remains the industry leader.

More High-Efficiency Solutions for More Buildings – Trane variable-speed water-source heat pumps are designed and built to meet the needs of a wide variety of buildings and are available in multiple configurations, including horizontal designs and models that support three-phase electrical power.

Energy-Saving Demand-Limiting Mode – Reduces system output during times of the day when utility costs are highest, but unlike competing systems, still provides functionality to preserve building occupant comfort.

Indoor Air Quality – With increased air filtration flexibility, a Trane variable-speed water-source heat pump can accommodate both MERV 8 and LEED-creditable MERV 13 filters.

Legendary Trane Reliability – Trane variable-speed water-source heat pump systems have proven superior quality, reliability, longevity and performance. Increasing this reliability even further is Trane eFlex variable-speed technology: it minimizes on/off cycling, which greatly reduces wear and tear on the Trane eFlex variable-speed compressor.

Note: Annual estimated energy use comparison projected using Trane Trace™ building energy and economic analysis software, assuming 91,000 sq. ft. of office space.

One system. Many benefits.
How Can a Trane Axiom Variable-Speed Water-Source Heat Pump Work for You?

The answer: Almost any way you wish. Because the full line of Trane® Axiom™ variable-speed water-source heat pumps has been developed to address nearly any structure scenario. Whether it’s for new construction or existing structures, for single or multiple buildings, to replace an existing heat pump system or to convert from another HVAC technology, there’s a Trane system for you—and skilled Trane professionals stand ready to help develop it, install it and bring it online.

A Horizontal and vertical configurations are available for maximum design flexibility.

B Integrated control system: Factory-programmed Tracer™ UC400 controls use Trane-developed algorithms to maximize the performance and energy-efficiency benefits of the Trane eFlex™ variable-speed compressors and fans.

C Electronically commutated motor (ECM) powers the eFlex variable-speed fan. This high-efficiency, long-life, brushless DC motor is well suited for applications requiring speed control over a wide operating range.

D Dual-sloped drainpan is noncorrosive and meets IAQ requirements.

E Insulated closure contributes to quiet operation.

F Dual-isolated compressor reduces noise and vibration.

G Vortica™ blower (horizontal model only): Advanced fan system uses less energy to produce more airflow with minimal sound.

Additional features

Airflow flexibility is provided by multiple return-air/supply-air combinations.

Air-filtration options include MERV 8 and LEED-creditable MERV 13 filters.

Safety devices include condensate overflow protection, freeze stat and refrigerant monitoring.

Enhanced dehumidification control for energy-efficient moisture removal.

R-410A refrigerant is non-ozone-depleting.

Geothermal systems, both new and existing, are fully supported by Trane variable-speed water-source heat pumps and can yield significant energy savings.

Scan the code to watch a video highlighting water-source heat pumps from Trane.
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.

Integrating UC400 System Controls
Trane® Axiom™ variable-speed water-source heat pump units are available with UC400 controls, which are factory programmed with Trane-developed algorithms to maximize each unit’s unique performance and efficiency benefits. These complex algorithms are specific to the high-efficiency potential of Trane eFlex™ variable-speed compressors and fans and simply can’t be duplicated in the field; by programming and testing each UC400 controller at the factory, system installation and optimization can be a smoother, faster process — and result in a higher performing, more efficient, more reliable system, day after day, year after year.
Ingersoll Rand (NYSE:IR) advances the quality of life by creating and sustaining safe, comfortable and efficient environments. Our people and our family of brands—including Club Car®, Ingersoll Rand®, Schlage®, Thermo King® and Trane®—work together to enhance the quality and comfort of air in homes and buildings; transport and protect food and perishables; secure homes and commercial properties; and increase industrial productivity and efficiency. We are a $14 billion global business committed to a world of sustainable progress and enduring results.

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