




Facts about the Trane® Stealth™ Air-Cooled Chiller

<p>What is the Trane® Stealth™ air-cooled chiller?</p>	 <p>The Trane® Stealth™ air-cooled chiller, available in the 150-300 ton capacity range, delivers an industry-leading combination of part-load efficiency (up to 20 integrated part-load value) and full-load efficiency (up to 12.1 energy efficiency ratio). Multiple InvisiSound acoustical treatment options provide the flexibility to meet specific application needs and the InvisiSound™ Ultimate package produces the lowest published sound levels in the industry. The chiller incorporates technological innovations to deliver superior performance and easier and faster maintenance, equating to an extremely low cost of ownership.</p>
<p>Features</p>	<p>AdaptiSpeed™ technology: At the core of the Stealth air-cooled chiller's efficiency is AdaptiSpeed™ technology — the integration of a direct-drive, specific-speed screw compressor, permanent-magnet motors and third-generation Trane Adaptive Frequency™ drive (AFD3).</p> <ul style="list-style-type: none"> • Direct-drive, specific-speed screw compressor - This technology delivers peak efficiency under all operating conditions. Compared to the previous compressor, this updated design — which is optimized for variable-speed operation — yields a up to a 10 percent improvement in compressor efficiency. • Permanent-magnet motors - The compressor's permanent-magnet motor design is up to 4 percent more efficient than conventional induction motors. Permanent-magnet, variable-speed, motors are also used in the Stealth™ condenser fans. These condenser fan motors offer an efficiency improvement of 2 percent or more at full-load operation, and 5 percent or more at part-load operation. • Trane third-generation Adaptive Frequency™ Drive (AFD3) - AFD3 offers a part-load efficiency improvement of more than 40 percent when compared to previous constant-speed chiller designs. Designed to last the life of the chiller, AFD3 is liquid cooled and contains durable film capacitors. • Compact, high-performance, integrated, low-charge (CHIL) evaporator technology - CHIL evaporator technology optimizes refrigerant flow for improved efficiency and better cooling performance, while using less refrigerant than traditional flooded designs. <p>Acoustical treatment options for nearly any application Quiet operation is designed into every Stealth air-cooled chiller as standard, along with two optional InvisiSound™ acoustic reduction treatments available to meet specific application needs.</p> <p>The key to low sound levels is the combination of variable-speed compressors, variable-speed condenser fans and an integrated compressor muffler. Because variable-speed compressors and condenser fans only operate as fast as demand levels require, their overall sound levels are less than those of constant-speed units. The integrated compressor muffler reduces sound even more — up to 10 decibels (dB) when compared to previous compressor designs.</p> <p>For additional sound reduction, the InvisiSound Superior package adds acoustical treatments to key sound-generating components. For installations that require the lowest published sound levels for an air-cooled chiller, the InvisiSound Ultimate package features a user-selectable noise-reduction mode that can be activated to limit the maximum condenser fan speed, achieving even lower sound levels and unit operation management to comply with nighttime and weekend noise restrictions.</p>



Features, continued	<p>Factory-installed solutions for easy installation and start-up Stealth air-cooled chillers include standard features and are available with additional factory installed options to make system design, installation and start-up faster and easier. Standard unit features include a high power factor, temperature-insulating materials and a sound-reducing treatment. Available factory-installed options include insulating materials with higher thermal properties, additional sound-reduction treatments, a power line harmonic filtration package and CompleteCoat™ condenser fin coating among others.</p> <p>Exclusive controls The Tracer™ UC800 provides the intelligence behind the Stealth chiller and features Adaptive Control™ algorithms that respond to a variety of conditions to maintain efficient chiller plant operation.</p> <ul style="list-style-type: none">• Easy-to-read 7-inch color touchscreen display - The display shows vital, at-a- glance information about current chiller performance, and graphical trending information about chiller performance over time.• Industry-leading control algorithms - The algorithms direct the chiller's operation, maximizing performance and reliability by optimizing variable-speed compressors and condenser fans, even in variable primary flow applications.• Adaptive Control™- This keeps the chiller working efficiently in extreme conditions, even with a loss of communication to a building automation system• Open-protocol design - This design allows the AdaptiView controller to work with any building automation system without the need for gateways, such as BACnet®, Modbus or LonTalk™.• Trane Intelligent Services (TIS) enabled - TIS offers 24/7 system monitoring and response capabilities. <p>Multiple features for mission-critical applications Stealth air-cooled chillers are designed for easy integration with facilities that have specialized requirements including:</p> <ul style="list-style-type: none">• Rapid restart capability - After a power interruption, Stealth air-cooled chillers can quickly regain full operational capacity, so mission-critical applications can continue with minimal interruption.• Easy compatibility with uninterruptible power systems (UPS) - AFD3 offers full compatibility with uninterruptible power systems for reliable chiller operation even during power outages.• Available harmonic filtration system - TheTrane true 24-pulse drive produces low harmonic distortion levels that meet the stringent requirements of IEEE 519. <p>Designed for Lower Maintenance The design of Stealth air-cooled chillers incorporates features such as long-life motors; transverse “open V” design condenser coils; a liquid cooled AFD3; shore power design which protects technicians from higher line voltages to make maintenance duties easier, safer and less frequent.</p>
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Benefits	Stealth air-cooled chillers deliver the following benefits: <ul style="list-style-type: none"> • Industry-leading combination of part-load and full-load efficiencies lowers energy and operational costs and can help companies to earn additional Leadership in Energy and Environmental Design (LEED) points, as well as qualify for rebates and incentives offered by utility companies across the country. • Quiet operation including the lowest published sound level option for noise-sensitive installations • Easier, faster installations and start-up • Compatibility with a variety of uninterruptable power supplies to support mission-critical facilities • Rapid restart capability to maximize uptime • Support for specialized building requirements • Easier, safer and less-frequent maintenance needs • Reliability through durable components
Key Markets	The Trane Stealth air-cooled chiller is ideal for a wide variety of building types and sizes – both new construct and existing buildings, especially for K-12 educational institutions and data centers.

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About Ingersoll Rand and Trane

Ingersoll Rand (NYSE:IR) advances the quality of life by creating comfortable, sustainable and efficient environments. Our people and our family of brands—including Club Car®, Ingersoll Rand®, Thermo King® and Trane®—work together to enhance the quality and comfort of air in homes and buildings; transport and protect food and perishables; and increase industrial productivity and efficiency. We are a global business committed to a world of sustainable progress and enduring results. Trane solutions optimize indoor environments with a broad portfolio of energy efficient heating, ventilation and air conditioning systems, building and contracting services, parts support and advanced control. For more information, visit ingersollrand.com or trane.com.

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