



Air-Cooled Series R™ Chiller



*The next generation of Air-Cooled
Helical Rotary Chillers*

ANOTHER RELIABLE SOURCE OF CHILLED WATER FROM TRANE



The new industry standard for

The next generation
of the air-cooled
Series R™ chiller family.

Air-Cooled Series R™ Chiller Model RTAC

140-500 Tons 60 Hz
120-400 Tons 50 Hz

The Model RTAC is the second generation of the air-cooled Series R chiller family. The RTAC offers high reliability, reduced sound levels, improved energy efficiency, and a smaller physical footprint, all due to its advanced design, low speed/direct-drive compressor, and proven Series R chiller performance.

The Next Generation

This most recent development is the advanced air-cooled chiller. It features a new generation of compressors, improved acoustic performance, and a smaller footprint for the same capacity.

Reliability

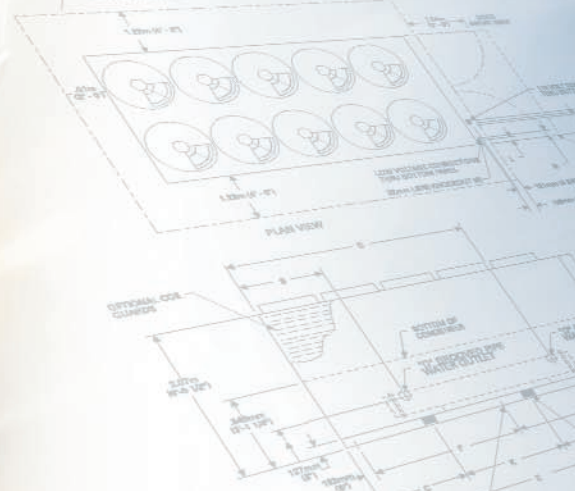
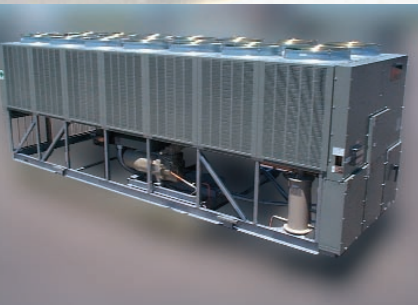
Less Downtime and Maintenance

The Trane Company is the world's largest manufacturer of large helical rotary compressors. Continuous extensive research and development, testing and advanced manufacturing processes provide the most reliable compressor in the air conditioning and refrigeration industry.

Tens of thousands of commercial and industrial installations (over 100,000 compressors) worldwide have proven that the Trane helical rotary compressor has an unequaled reliability rate of 99.5 percent in the first year of operation.

How does Trane achieve these world-class standards? The Trane Series R chiller uses a direct-drive, low speed, semihermetic compressor design with fewer moving parts than other compressors available on the market.

- The reliability and well-known life span justify their commercial success: more than 100,000 Trane helical rotary screw compressors are operating in the world.
- Trane has proven the best way to obtain the best performances and reliability lies in the development of a specific compressor.
- Fewer moving parts, fewer critical components, simple design, and over 14 years of manufacturing know-how are the ingredients for the quality and reliability of Trane helical rotary compressor water chillers.



for reliability, sound, efficiency, and size.

Sound

Improved Acoustical Performance

The Trane Company has a proven track record of continuously improving the sound levels of our water chillers. One of the primary design goals of the RTAC was to further reduce sound levels over previous marketplace designs. This goal was met by designing the compressor to minimize sound generation and by optimizing and isolating chiller components to reduce sound propagation throughout the system. The result is a new acoustical standard for air-cooled chillers.

The sound levels of the Series R™ Model RTAA air-cooled chillers have been steadily improved since introduction. With the advent of the Model RTAC, sound levels are reduced significantly by addressing three major sources: the compressor, the refrigerant piping, and the condenser fans. The compressor has been designed to minimize sound at its point of creation. In addition, the refrigerant components and piping have been optimized to reduce sound propagation throughout the system. A third source of sound originates from the condenser fans. This sound power can be as much as half of the overall unit sound power levels. Careful consideration was taken when designing and selecting the next generation condenser fans to be engineered into the Model RTAC. The sound levels achieved on the RTAC represent the lowest sound levels ever on Trane air-cooled screw compressor water chillers.

Efficiency

Lower Operating Costs

The use of advanced heat transfer technology has allowed the Series R chiller to achieve record energy efficiency levels. Trane offers superior full-load performance and optimized part-load performance. Energy efficiencies above 10.8 EER at ARI conditions means that the RTAC is the most efficient air-cooled chiller available.

Using a compressor which has infinite unloading and can match the cooling load exactly can further reduce energy consumption. Not all helical rotary compressors are the same. Some screw compressors have step unloading similar to reciprocating compressors of the past. Under part-load conditions, these chillers would typically be overcooling or undercooling the chilled water. This results in increased chiller operating costs and unwanted variations in chilled water supply temperatures. The Series R compressor unloads the chiller smoothly and allows it to closely match a building's cooling needs or an industrial process load. This increases control over the chilled water temperature, at the same time reducing annual operating costs.

Size

Ease of Installation

The compact air-cooled Series R chiller is an excellent choice for any retrofit or replacement job. It is smaller than most of the chillers it might replace and an easier fit into the layout and landscaping of existing buildings.

In addition, the unit design allows for installations where the condenser coils are only four feet from a wall with no performance reductions.

More compact than most of the chillers available on the market, it is equally suited to new buildings as well as the replacement market.

In an installation where space is limited, the RTAC can operate with a relatively narrow gap in front of the condenser causing only a minor capacity derate.

Units come from the factory fully charged with refrigerant and oil. Extensive factory testing helps ensure trouble-free startup, resulting in lower installation costs and a faster startup.

Controls

Trane's Adaptive Control™ microprocessor is the most advanced chiller controller available in the industry today. It offers internal control logic that monitors the chiller's operation and keeps it running during extreme operating conditions. While controls on other chillers will shut down machine operation, the Trane Series R chiller will modulate system components to keep the chiller online producing chilled water, meanwhile continuing to optimize chiller performance.

The Tracer™ chiller controller microprocessor has two operator



Trane RTAA140 Tons

Trane RTAC140 Tons

The compact size of the RTAC unit makes it an excellent choice for new buildings or replacement of older chillers.



DynaView display unit.



interfaces, the "EasyView" with a built-in display unit placed in the front of the control panel and the optional "DynaView," which is a true man/machine interface. DynaView enables the user to monitor operation of the machine quickly and easily.

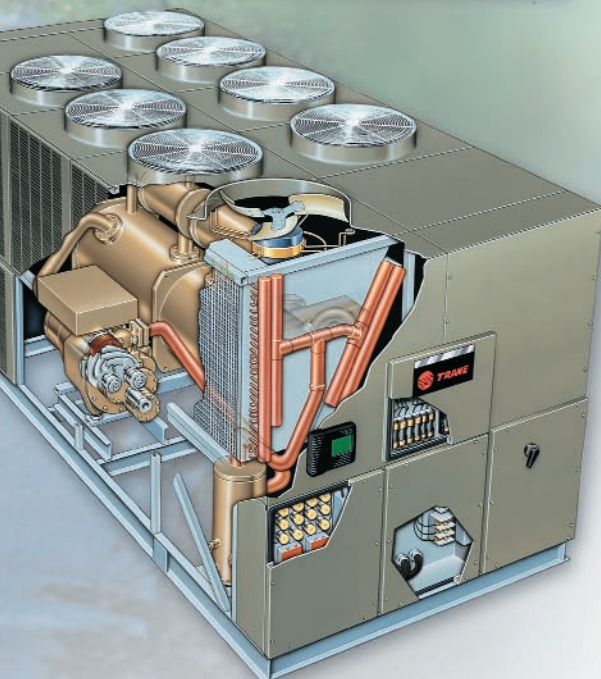
The Tracer chiller controls of the Model RTAC offers several communication levels that considerably simplify the implementation of telemonitoring of the chiller or its integration into a Building Management System (BMS).

Ownership Value

The Model RTAC air-cooled chiller was designed to meet the demanding requirements of today's environment. The high-technology design transforms



An RTAC chiller integrates easily into your overall comfort strategy.



technology into the performance you can depend on. For example, its semi-hermetic, direct-drive compressor eliminates the need for a gearbox, a common component in many competitive chillers. This improves the unit's reliability, energy efficiency, and significantly aids in reducing unit sound levels and vibration. Also, the Adaptive Control™ microprocessor aids in improving energy-efficiency and provides more reliable operation by minimizing "chiller downtime." This is accomplished with the microprocessor control, which continuously monitors the operating conditions of the chiller and automatically initiates corrective action, especially during adverse conditions.

Trane chillers are known for their quality, reliability, and flexibility in a wide range of chilled-water systems. However, the chiller is but one component in any chilled-water system. Components such as the pumps, valves, filters, water quality, and controls

Office Buildings

Schools

Low Temperature Process and Industrial Applications

Government

Retail/Shopping

Health Care

Internet Service Providers

Whatever your operating environment, this chiller is made for it.

can adversely affect the performance of any system. Proper maintenance of the entire chilled-water system is necessary to yield many years of predictable performance. Trane recommends that a preventive maintenance program be established with a professional service organization. A trained professional can help you maintain optimum performance in the chiller and the rest of the chilled-water system, year after year, so you can realize the performance you need.

The Trane Company, with over 220 Customer Solutions and Services Centers located around the world, is uniquely positioned as the professional service organization that can provide you with a wide range of solution support for your complete environmental system.

Refrigerant

The Trane Company is committed to providing the right refrigerant in the right equipment at the right time. Trane, along with ASHRAE, ARI, and the U.S. EPA, actively supports all three major chiller alternative refrigerants: HCFC-22, HCFC-123, and HFC-134a. The Model RTAC chiller was specifically engineered to use the

medium pressure alternative refrigerant HFC-134a. This choice allows the RTAC to meet world-class chiller design criteria for reliability, efficiency, size, and acoustic performance.

Applications

RTAC is a chiller designed for the Industrial and Commercial market.

RTAC is also a chiller designed for all climates, with high and low ambient units available.

This flexibility in the application of the Series R chiller makes it ideal for office buildings, hospitals, schools, internet and telecommunications service providers and industrial applications.

- *Comfort Cooling*
- *Industrial Process Cooling*
- *Ice/Thermal Storage*
- *Low Temperature Process Cooling*

Control Strategies – The Integrated Comfort™ System

With Tracer Summit building management, building owners and operators get powerful control, diagnostics, monitoring, and reports; extending from

individual chillers to the chiller plant, or to the entire comfort system.

In addition, an Integrated Comfort System provides:

- *Optimized Operating Costs*
- *A Consistently Comfortable Environment*
- *The Reliability of Direct Digital Controls*
- *Efficiency from Pre-tested Energy Management Strategies*
- *Single Source Manufacture, Warranty, and Service*

Quality

The Trane Company's water chiller systems business unit in Pueblo, Colorado is an ISO 9001 Certified facility. This level of dedication to quality is what chiller owners have come to expect from Trane chillers. Each Series R chiller goes through extensive factory testing to dramatically reduce startup problems.



TRANE®

The Trane Company
An American Standard Company
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*For more information contact
your local district office or
e-mail us at comfort@trane.com*

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Stocking Location La Crosse

Since The Trane Company has a policy of continuous product and product data improvement, it reserves the right to change design and specifications without notice.