



Trane® Optimus™ Water-Cooled Chillers

150 – 430 tons



Trane Optimus Helical Rotary Chiller



The chiller that gives you choices

You need a chiller that delivers reliable cooling performance — and offers the capacity, energy efficiency and lasting value your unique application requires. This is why you need a Trane® Optimus™ chiller.

Designed for faster, easier installations, Optimus chillers can immediately add value to new and retrofit projects. That value continues over long lifetimes, with low maintenance requirements and enhanced energy-efficiency options that can significantly reduce operating costs.

Interior comfort. Low-temperature process cooling. Advanced and specialized applications. For so many customers and their buildings, Trane Optimus chillers are more than a refreshingly different choice. **They're the best choice.**



Comfort you can count on

Robust, dependable operation under a variety of conditions makes Optimus chillers ideal for comfort cooling.

- A highly reliable semi-hermetic design, excellent compressor lift and continuous unloading help ensure efficient comfort for high-occupancy buildings, like schools, hospitals and hotels.
- Trane helical rotary technology is a versatile solution, making it well suited for hot, humid climates, as well colder locations, where chiller loads seldom reach their peak.

Precise chilled water temperature control

Critical industrial and low-temperature process cooling requires precision — precision that Trane chillers excel at providing. The combination of Trane controls, compressors and expansion valve technology can deliver exceptionally precise chilled water temperature control, with variance as tight as 0.5°F (0.3°C).

A cooling solution — and so much more

Only Trane offers unique benefits and advantages that can enhance the cooling performance, energy savings and overall value of your new Optimus chiller.

Paired with Trane controls, which are designed with unique algorithms, the operation of your particular model of chiller is maximized for the best output and efficiency — an exclusive Trane difference. And to keep your Trane system working optimally throughout a long life, your exact needs for monitoring and service can be precisely met by Trane experts.

That's the Trane difference — and it's just one more way Trane makes buildings better for life.

Support for advanced and specialized applications

- An Optimus chiller supports thermal storage systems by making ice at night, when utility companies charge less for electricity. Stored ice can supplement, or even replace mechanical cooling during the day, when utility rates are at their peak.
- Trane chillers can be configured to produce leaving-evaporator solution temperatures as low as 10°F (-12°C), making them ideal for cold-temperature applications like quickfreezing an ice rink.
- In heat-recovery applications, a Trane Optimus chiller can generate condenser water temperatures as high as 114°F (45.6°C) for reheating air at VAV boxes, preheating air for air handlers, snow melt and other heating processes.



Multiple advantages

Trane® Optimus™ chillers offer numerous benefits to meet the needs of a wide range of customers and their buildings. Beginning at installation and lasting throughout their years of reliable service, Trane chillers are designed to deliver outstanding performance and exceptional value.

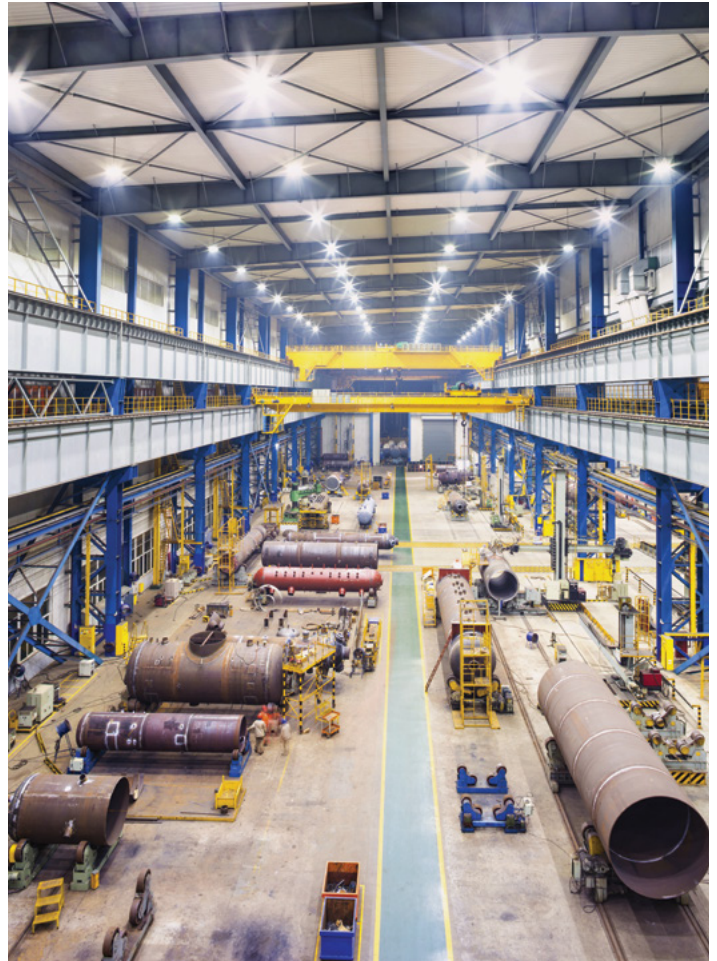
The capacity you need

Optimus chillers support a broad range of cooling capacities — from 150 to 430 tons — to meet the needs of a myriad of different buildings and applications.

Retrofit-friendly installations

Trane chillers are engineered for simpler installations, which means less time and less money — advantages in any application, but especially when replacing an existing chiller.

- Trane Optimus chillers can fit through a standard double door.
- Bolt-together construction allows access through even smaller passages.



Outstanding chiller performance

Proven Trane helical rotary chiller technology is one of the most robust cooling solutions available today. It's why Optimus chillers deliver the best combination of overall value and ongoing operational cost savings in realworld applications.

- Full-load energy efficiency reduces operating and lifecycle costs.
- Enhanced controls keep the chiller operating at all condenser water temperatures, even during cold weather.
- Advanced design enables water temperature control precision to within 0.5°F (0.3°C), which also allows more accurate humidity control.
- Flexible features — including evaporator and condenser arrangements — allow you to select the level of efficiency and water-piping arrangement that's best for your system, building and operations.

Energy efficiency

Trane helical rotary chillers have always offered attractive energy-efficiency solutions, with models delivering industry-leading efficiency throughout the tonnage range: up to 39 percent better than the industry standard requires. Optimus chillers are a perfect fit for central geothermal applications, too.

The result can be energy efficiency that makes your building eligible for rebates from participating utility providers — significant benefits for your bottom line. And because Trane Optimus chillers consume less electricity, they place less burden on power plants — a significant sustainability benefit.

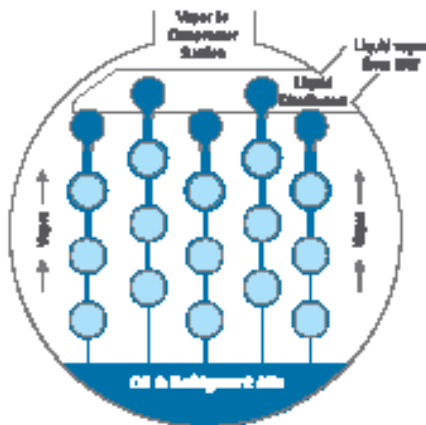
Heat recovery and water-side heating

Optimus chillers support energy-saving initiatives by repurposing compressor-generated heat that normally would be rejected into the atmosphere.

- Compressor-generated heat can temper supply air.
- Water for water heaters, laundry or boilers can be preheated.
- The chiller can serve as a building heat source in moderate climates.

Proven evaporator design

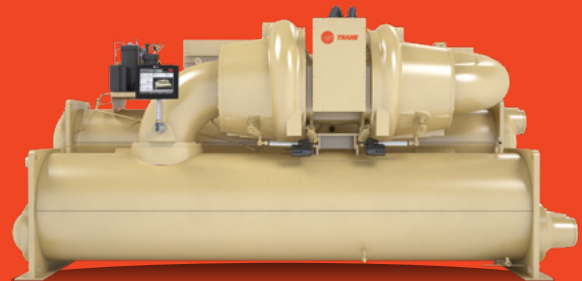
The unique evaporator used in Trane Optimus chillers results in higher efficiencies using less refrigerant charge — two benefits that can help contribute to a building earning LEED® certification. Liquid refrigerant (dark blue) is uniformly distributed over the top row of tubes. It then flows around the tubes, precisely at the points where heat transfer occurs, to more efficiently cool the fluid (light blue) inside.



Adaptive Frequency™ drive

A fully integrated variable-speed drive is available on Optimus chillers. This advanced drive works with the chiller motor and Tracer AdaptiView™ controls to continuously match compressor speed to required levels. Chiller efficiency is significantly improved at reduced load with or without lift reduction.

For maximum efficiency in the 180 – 390 tonnage range, no other chiller can beat the Trane Series S™ CenTraVac™ centrifugal chiller. The Series S delivers the highest full-load efficiency as well as the highest partload efficiencies in the industry, with an IPLV rating that substantially exceeds ASHRAE 90.1 requirements.



Ultimate control

Tracer™ controls add advanced intelligence to Trane® Optimus™ chillers, offering precise levels of system operation that deliver advantages in performance, efficiency and reduced energy consumption. Other controllers simply can't match up.



Industry-exclusive interface

Tracer controls are integrated with an easy-to-use 7-inch color touch-screen display that shows vital, at-a-glance information about current chiller performance, as well as graphical trending information about chiller performance over time. More than 100 diagnostic and operating points are available. No other chiller includes a more feature-filled control user interface that's easier to operate.

The capacity you need

- **Adaptive Control™ algorithms** — All Trane chillers produced today utilize industry-leading control strategies that respond to a variety of conditions to maintain efficient chiller plant operation. These control strategies effectively direct the operation of the chiller, maximizing both performance and reliability by optimizing variable-speed compressors and condenser fans, even in variable primary-flow applications.
- **Adaptive control** — Keeps the chiller working efficiently in extreme conditions — even if there is a building automation system failure — so you can count on reliable operation when you need it the most.
- **Open-protocol 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

Optimus chillers can be supported by Trane Intelligent Services (TIS), providing off-site monitoring of vital system functions. Multiple service options let you pick the protection you want for peace of mind 365 days a year, 24 hours a day.

Reliable, low-maintenance operation

Over the many years a chiller will serve you, its total cost of ownership will be revealed. A Trane chiller is designed to make that cost as low as possible with reliable, low-maintenance operation you can depend on — which is just one reason why more Trane helical rotary chillers are installed in the U.S. than chillers made by any other manufacturer.

Proven compressor design

Trane is the world's largest manufacturer of helical rotary chiller compressors, with demonstrated performance over decades of operation. Reliability enhancing engineering features include:



- **Direct-drive design** — Gears and transmissions experience wear and eventual failure. The direct-drive design eliminates that failure risk, and improves the overall reliability of the compressor.
- **Low-speed operation** — The Trane Optimus chiller compressor has a full-load design speed of 3,600 rpm. The slower a compressor turns, the less wear it accumulates.
- **Few moving parts** — Trane Optimus chiller compressors have only three moving parts: a simple, long-lasting design.

Quality tested

Before any Trane chiller leaves the factory, it undergoes thorough quality testing to ensure it's ready to serve you and your building. Optional factory performance testing or rapidrestart testing to your exact specifications is also available.

Minimal maintenance needs

Under normal operating conditions, Trane chillers require very little maintenance.

- As with all water-cooled chillers, periodic tube cleaning is recommended for the most efficient operation.
- An annual oil check is recommended to confirm the chiller is operating normally.

Extended-durability options

Your Trane chiller can be made even more durable with advanced options, including copper-nickel tubes and marine water boxes.

Exceptional warranty protection

Trane Optimus chillers are available with up to 10-year warranties — the longest in the industry. These warranties are 100 percent backed and fulfilled by Trane.



Trane Optimus water-cooled chillers: refreshingly different

So many benefits: Designed for easier installations, especially retrofits. A wide range of cooling capacity, from 150 to 430 tons. Available Adaptive Frequency™ drive, which can deliver up to 39 percent higher efficiency than required by ASHRAE 90.1 standards — outperforming many similarly sized centrifugals. All from a versatile chiller with low maintenance requirements and legendary reliability for enduring value. It's an optimal combination of value for so many cooling applications ... including yours.

Scan the code or
visit Trane.com/Optimus
to learn more.



Learn more at 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 or tranetechnologies.com.

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