



TRANE®

EarthWise™ CenTraVac™ Industrial Liquid Chillers 165 to 3,950 Tons

Technically An Industrial Chiller

Technically, EarthWise™ CenTraVac™ chillers are designed for industrial applications. Their precision control capabilities, solid mechanical engineering, and wide array of design parameters work best in rigorous industrial applications that require robust design flexibility.

Key to the CenTraVac's robust design are the following features:

- Low-pressure operation that minimizes the chance for outward refrigerant leaks.
- Hermetically sealed and precision cooled by liquid refrigerant that keeps the motor, drive, and equipment room temperatures controlled, monitored and predictable by design. Taking predictable reliability to yet another level, this feature also protects against motor-destroying elements such as dust, grit, metal shavings, high humidity, high ambient operating temperatures, and process liquids or gases.
- Designed to be rugged and simple, yet amazingly quiet, the CenTraVac is directly driven, in low speed, by a motor shaft that is supported by two aircraft-turbine-rated bearings. The design includes industrial-grade components and only one moving part. Likewise, the design purposely excludes speed-increasing gears and lightweight parts that, while accessible, have a higher failure rate.
- The new Tracer Chiller controller increases the chiller's on-line tolerance for quick changes in refrigerant loop conditions, variable pumping strategies, and other atypical operating requirements such as chilled-water temperatures down to 34 degrees F.



CenTraVac™ industrial cooling equipment featuring Tracer™ predictive controls

Economically and Environmentally Considerate

As fast as we can advance technology, Trane equipment is designed and redesigned to consume less energy and keep refrigerant in. Past technology allowed for efficiency levels between .56 and .60 kW/ton. Today, many CenTraVac chillers are selectable at efficiency levels as low as .48 kW/ton at standard ARI rated conditions. The .48 kW/ton difference represents efficiencies that are 16 to 25 percent better than past technology would allow. The real difference shows up in reduced energy bills and feeling good about choosing a product designed with the environment in mind.

Tracer™ Predictive Control Strategies

Today's CenTraVac chillers offer predictive controls that anticipate and compensate for load changes. Other control strategies made possible with the Tracer Chiller controller are:

- Soft loading to prevent unnecessary compressor cycling and higher energy costs
- Feedforward control for maintaining steady cooling temperatures even during load changes

- Fast restart for chiller operation when you need it
- Adaptive frequency drive control (AFD) for higher efficiency and stable chiller operation that lasts
- Variable primary flow control (VPF) that reduces energy consumption by the pumps and the chiller
- Variable flow compensation control that makes varying water flow a non-issue
- VPF control with AFD control – an energy saving combination that Trane has and others don't
- Capability to produce 34 degree F chilled water
- Multi-objective limit arbitration for control sense that safely keeps the chiller online

Updatable Controls Interface and Software

The Tracer Chiller controller provides operation settings and reports using an easily understood display. A portable chiller interface can be installed or downloaded from the Trane website into your laptop computer for access to an unprecedented amount of diagnostics and configuration settings.

EarthWise HVAC System Designs

The EarthWise System uses a design philosophy that reduces first cost, lowers operating costs, and is substantially quieter than traditional systems. Central to the design are low flow, low temperature, and high efficiency for both airside and waterside systems, along with optimized control algorithms for sustainable performance.

EarthWise Systems are less expensive to install and operate than conventional designs. With smaller equipment and ductwork, the EarthWise concept reduces design time by simplifying the HVAC layout. Supplying less airflow at colder temperatures permits quieter operation and reduces relative humidity in the building, improving indoor air quality. Trane Integrated Comfort System (ICS) control technology ensures that the EarthWise System delivers optimal, reliable performance.

Compared to conventional designs, an EarthWise chilled-water system can reduce the total cost of ownership by decreasing installation and operational costs.

To learn more about EarthWise Systems, visit:

www.trane.com/commercial/issues/earthwise_systems

Proof of Promised Performance

To prove that your chiller will perform as promised, Trane offers factory performance testing that customers can witness.

Trane chillers ship only after they have met rigorous operating conditions. Each chiller must endure performance test procedures on ARI Standard 550 approved test loops.

Engineers, owners, operators, and installers appreciate the problems that factory testing can eliminate at chiller startup.



CenTraVac™ liquid chiller features industrial dual compressor construction in sizes up to 3,950 tons

Delivery And Design Flexibility

If delivery time is a priority, Trane can meet your needs with a variety of quick shipment choices.

CenTraVac chillers can be custom built to meet your specific job requirements. Design parameters such as shell type, compressor, kW/ton, and waterside pressure drop, as well as full- and part-load performance can be configured into thousands of chiller variations.

A Wide Array of Starters – And Now Factory Installed In Medium Voltages Too!

That's right, Trane now mounts, wires, and tests 2300-6600 volt starters at the factory so that you don't have to. This reduces, or eliminates altogether, the time, expense, and any added risk associated with having the starter installed and wired at the job. This unit-mounted convenience is currently available from Trane only.

Trane unit-mounted starters can now be applied to low- or medium-voltage applications.

Advanced EarthWise Purge System

Every CenTraVac chiller ships with an advanced purge system that includes refrigerant- and time-saving features. It is so advanced, it includes an autoregeneration feature that returns refrigerant back to the chiller automatically — a breakthrough in purge technology, currently only available from Trane.

This auto-regeneration feature further enhances purge efficiency and eliminates the need to manually maintain top purge efficiency.

The EarthWise purge design also includes an integrated and advanced pumpout strategy that intelligently removes non-condensables from the chiller up to four times faster than previous purge designs.

Unmatched Local Expertise

The performance and reliability of a CenTraVac chiller is backed by a local team of engineers that can help answer your questions or solve your problems regarding system design application or installation, and evaluate equipment alternatives. No other manufacturer can offer that degree of support to its customers.



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For more information contact your local district office or e-mail us at comfort@trane.com

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