



Water-Cooled Chillers

A full portfolio of solutions for comfort and process applications

Helping to meet sustainability challenges head on with water-cooled chiller solutions

Today, buildings are responsible for 40% of total energy use in the United States¹. HVAC usage accounts for 44% of all commercial building energy usage². Recognizing this opportunity to help reduce energy intensity and lessen environmental impact, Trane has enhanced its fleet of water-cooled chillers to help improve efficiency, reduce operating expenses and benefit the environment.

Driven by significant advances in design technology, and the introduction of next-generation refrigerants, Trane's water-cooled chiller portfolio embodies this progress by delivering an innovative product lineup that meets a variety of application challenges. This commitment to finding solutions runs deep at Trane—since 1938. Today's CenTraVac® chillers have been recognized by the industry as one of the quietest, most reliable and efficient low-emission chillers in the world.

Trane's water-cooled chiller portfolio features models with centrifugal, helical rotary screw and scroll compressor designs, each with their own impressive benefits and applications:

- CenTraVac centrifugal chillers provide the lowest total energy cost of ownership by delivering legendary reliability and outstanding full- and part- load efficiency
- Agility® oil-free magnetic-bearing chillers offer a great balance of efficiency, reliability and low installation costs through their compact size and bolt-together design
- Series R® helical rotary screw chillers deliver the lowest installed costs while providing the flexibility, reliability and efficiency your application requires
- The Cold Generator family of scroll chillers is a broad line of cooling solutions with traditional and modular models that offer great serviceability and performance

Trane innovation is leading the industry into the next generation of cooling. Let's go beyond.

Read on to see which Trane Water-Cooled chiller model is right for your project »

¹ <https://www.nrel.gov/news/features/2023/nrel-researchers-reveal-how-buildings-across-the-united-states-do-and-could-use-energy.html>

² <https://www.gridpoint.com/blog/hvac-maintenance-costs-the-ultimate-guide/>



CENTRIFUGAL

CenTraVac® Product Family



CenTraVac Water-Cooled Chillers

The low-pressure direct-drive multistage design delivers upward of 13.5% better efficiency as compared with other centrifugal chillers.

CAPACITY: 250 to 2,000+ tons, 60/50 Hz

Models CVHE, CVHF, CVHG and CVHH



Duplex® CenTraVac Water-Cooled Chillers

With a series counterflow design and dual independent refrigerant circuits, the Duplex chiller reduces energy consumption by up to 13% over a single-compressor unit.

CAPACITY: 1,500 to 4,000+ tons, 60 Hz; 1,200 to 4,000+ tons, 50 Hz

Models CDHF, CDHG and CDHH

Agility® Product Family



Agility Water-Cooled Chiller

Combining efficiency, reliability and compact size, the Agility® chiller meets a wide range of rigorous conditions to improve building performance.

CAPACITY: 175 to 425 tons, 60/50 Hz

Model HDWA



HELICAL ROTARY SCREW

Series R® Product Family



Series R Helical Rotary Chillers

The Series R chillers are designed for easy installation, application flexibility, high dependability and enhanced energy efficiency.

CAPACITY: 80 to 400 tons

Models RTWD/RTHD

CENTRIFUGAL

CenTraVac® Water-Cooled Chillers

Models CVHE/CVHF/CVHG and CVHH

Centrifugal chillers with outstanding efficiency and reliability.



At a glance

- Semi-hermetic motor design, along with low-pressure refrigerant, provide low refrigerant leak rates and the industry's lowest documented refrigerant emissions rate — less than 0.5% annually
- Multiple stages of compression provide surge resistance and overcome high head-pressure conditions, offering more consistent comfort levels across a wide range of applications
- Efficiency-enhancing features, such as an integrated flash economizer improve cycle efficiency by 5% to 7%, delivering industry-leading efficiency for low lifecycle costs

Overview

Trane CenTraVac chillers feature a time-tested and proven low-pressure design utilizing environmentally friendly refrigerants R-514A and R-1233zd. They provide low pressure with continued product enhancements in a leak-tight design. Available in a wide range of cooling capacities, CenTraVac chillers provide from 250 to 2,000+ tons of cooling with 60 Hz and 50 Hz power options.

The CenTraVac compressor has only one moving part supported by just two bearings, helping to provide reliability through simplicity of design. The low-speed direct-drive design not only gives the CenTraVac compressor the most reliable and efficient operation, but also the lowest sound and vibration levels in the industry.

Specifications

Capacity Range: 250 to 2,000+ tons, 60/50 Hz

Refrigerant: R-514A and R-1233zd

Compressor Design: Centrifugal

Controls: AdaptiView™ user interface with Symbio® 800 unit controller

Factory-installed Optional Features: Heat recovery, ice making, free cooling options, variable frequency drives, mechanical starters

CENTRIFUGAL

Duplex[®] CenTraVac[®] Water-Cooled Chiller

Models CDHF, CDHG and CDHH

A reliable large-capacity option with next-generation refrigerant



At a glance

- Semi-hermetic motor design, along with low-pressure refrigerant, provide low refrigerant leak rates and the industry's lowest documented refrigerant emissions rate — less than 0.5% annually
- Multiple stages of compression provide surge resistance and overcome high head-pressure conditions, offering more consistent comfort levels across a wide range of applications
- Efficiency-enhancing features, such as an integrated flash economizer help improve cycle efficiency by 5% to 7%, delivering industry-leading efficiency for low lifecycle costs
- Ideal for large-tonnage applications

Overview

For larger cooling capacities, the Duplex CenTraVac chiller expands to more than 4,000 tons. The chiller utilizes a series counterflow design with two independent refrigerant circuits that leverage thermodynamic staging to deliver unmatched efficiency. Designs of the Duplex chiller help reduce energy consumption by up to 13% over a single compressor unit and, when paired in a series configuration, energy savings may increase to as high as 19%.

The direct-drive compressor helps deliver reliability through simplicity of design and fewer moving parts while enabling industry-leading efficiencies and the lowest sound and vibration levels. The semi-hermetic motor operates in a cool and clean environment, extending the life of the chiller and reducing the heat that would otherwise impact the mechanical room. The multistage compressor provides stable and reliable operation across a wider range of operating conditions while the low-pressure design enables a near-zero refrigerant leak rate.

Specifications

Capacity Range: 1,500 to 4,000+ tons, 60 Hz;
1,200 to 4,000+ tons, 50 Hz

Refrigerant: R-514A and R-1233zd

Compressor Design: Centrifugal

Controls: AdaptiView™ user interface with Symbio® 800 unit controller

Factory-installed Optional Features:

Heat recovery capabilities up to 140°F (60°C); thermal storage down to 18°F (-7.8°C); integrated free cooling; low-, medium- and high-voltage offerings

CENTRIFUGAL

Agility® Water-Cooled Chiller

Model HDWA

Exceptional performance in a compact footprint



At a glance

- Enhanced with next-generation low-GWP refrigerant R-513A, which provides a 55% lower GWP than R-134a
- Fits through a standard double door (72 in. x 80 in.) fully assembled and can be separated into two sections that fit through a single door (36 in. x 80 in.), making it ideal for retrofitting existing buildings
- Utilizes oil-free magnetic bearings with improved compressor speeds
- Operates at a medium pressure, which allows it to occupy a smaller footprint

Overview

The Agility water-cooled chiller provides improved performance with a compact size and enhanced footprint that helps reduce installation costs. Leveraging oil-free magnetic bearings with enhanced compressor speeds and the latest Trane proprietary (CHIL™) heat exchanger designs, the Agility chiller delivers Integrated Part Load Values (IPLV) over 40% better than the ASHRAE® 90.1-2016 standard.

The Agility chiller utilizes a two-stage semi-hermetic centrifugal compressor with a permanent-magnet refrigerant-cooled motor that delivers efficient, stable operation. This allows customers exceptional flexibility to meet their application needs.

Specifications

Capacity Range: 175 to 425 tons, 60/50 Hz

Refrigerant: R-513A

Compressor Design: Centrifugal

Controls: AdaptiView™ user interface with Symbio® 800 unit controller

Factory-installed Optional Features:
Ice making, heat recovery

Series R[®] Water-Cooled Chillers

Model RTWD

Expanded heating capabilities for boiler replacement with reliable performance and versatility



At a glance

- Refrigerant: R-515B for heating applications, achieving hot water temperatures of up to 165°F (74°C)
- Advanced Controls: Symbio[®] 800, including wireless options for enhanced connectivity
- Expanded Cooling: R-513A refrigerant for both comfort cooling and low-temperature industrial applications, with leaving evaporator solution temperatures as low as 10° F (-12° C)

Overview

The Series R RTWD model offers expanded heating capabilities for boiler replacement in a broader array of applications, helping engineers meet building codes for heat recovery and also helping to reduce reliance on gas boilers.

The RTWD chiller may help you meet your sustainability goals, utilizing R-515B refrigerant for heating applications, which is more environmentally friendly and capable of delivering hotter water temperatures of up to 165° F (74° C), making it ideal for electrified heating applications. The RTWD chiller utilizes R-513A refrigerant for comfort cooling and low-temperature industrial cooling applications, with leaving evaporator solution temperatures as low as 10° F (-12° C). Both refrigerants offer a 55% reduction in GWP compared to R-134A.

Symbio controllers integrate with building automation systems, allowing you to connect to an array of Trane systems, access detailed energy usage dashboards, perform various energy efficiency and chiller performance analyses and receive actionable insights on equipment enhancement opportunities. Its compact footprint allows the RTWD chiller to fit through standard double doors for easy installation, reducing installation challenges and freeing up premium space.

Specifications

Capacity Range: 80 to 250 tons

Refrigerant: R-515B or R-513A

Compressor Design: Helical rotary screw

Controls: Symbio 800 controller

HELICAL ROTARY SCREW

Series R[®] Helical Rotary Chiller

Model RTHD

Adds value while delivering long-term benefits



At a glance

- Symbio[®] 800 controllers enhance equipment performance and enable wireless options for improved connectivity
- Cooling Capabilities: Can be configured to produce leaving evaporator solution temperatures as low as 5° F (-15° C), making it ideal for cold-temperature applications like quick freezing an ice rink
- Refrigerant: R-513A refrigerant for both comfort cooling and low-temperature applications

Overview

The Series R helical rotary screw model RTHD, which is built to support a wide variety of applications, may add value to new and retrofit projects while its low maintenance and energy efficiency help deliver long-term benefits. Larger than the Series R helical rotary screw model RTWD, the RTHD chiller is ideal for comfort cooling. The RTHD features heat recovery capabilities up to 111° F (44° C) and can also work with specialized low-temperature applications, providing comfort customers can count on. Its compact footprint allows the RTHD chiller to fit through standard double-width doors for easy installation.

Specifications

Capacity Range: 175 to 400 tons

Refrigerant: R-513A

Compressor Design: Helical rotary screw

Controls: Symbio 800 controller

SCROLL

Cold Generator Scroll Chillers

Modular, flexible and expandable chillers with superior performance

Overview

The Trane Cold Generator family of scroll chillers (models CCAR and CGWR) is a broad line of comfort and process-cooling solutions. Each unit is known for its design, serviceability and performance qualities—while at the same time offering efficiencies unmatched by traditional reciprocating compressors at both full- and part-load conditions.

At a glance

- Scaled to fit through standard doorways (36 in. x 80 in.) for ease of installation
- Heat recovery capabilities up to 130°F (54°C)
- Models feature mechanically cleanable and serviceable shell and tube condensers, ideal options for open water loop and cooling tower applications

Scroll Chiller CCAR Series

Specifications

The Trane Cold Generator Scroll Compressor Chiller is a remote condensing solution design for split-system applications.

Capacity Range: 20 to 75 tons, 60 Hz

Refrigerant: R-454B

Compressor Design: Scroll

Controls: BACnet, LonTalk® and Modbus®

Additional Features:

- Brazed plate evaporators
- Factory-run-tested
- Factory charged with dry nitrogen
- Ice-making capabilities
- Full sound attenuation enclosure or compressor blankets
- Touchscreen controller interface



SCROLL

Scroll Chiller CGWR Series

Specifications

The Trane Cold Generator Scroll Chiller CGWR series is a Water-Cooled solution designed for quiet, reliable high-efficiency operation.

Capacity Range: 20 to 75 tons, 60 Hz

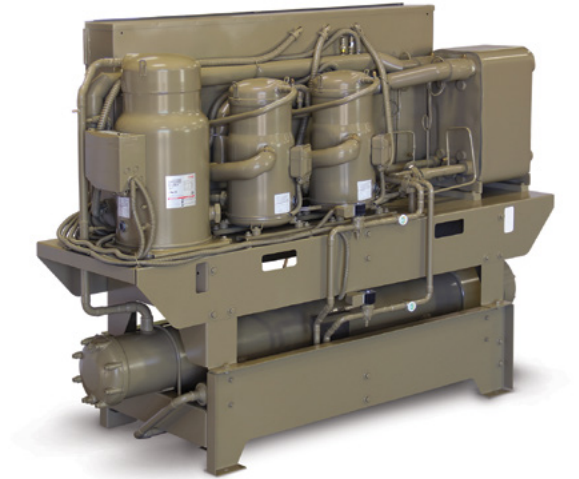
Refrigerant: R-454B

Compressor Design: Scroll

Controls: BACnet, LonTalk® and Modbus®

Additional Features:

- Brazed plate evaporators
- Mechanically cleanable shell and tube condenser
- 100kA Short Circuit Current Rating (SCCR)
- Factory-run-tested
- AHRI Certified®
- Custom paint colors



2030 Sustainability Commitment

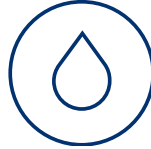
Sustainability is a greater purpose that allows us to make a positive impact on the world. Our 2030 Sustainability Commitment is designed around supply chain and operations, world-leading products, system and services and enhancing the quality of life. It challenges us further to address global issues like climate change, and to be the brand the world looks to for solutions that reduce energy dependence and emissions, and preserve food, water and other natural resources. We are putting the best minds and the best technology to work to go beyond what's possible.

GLOBAL TRENDS IMPACTING OUR WORLD AND INDUSTRY



URBANIZATION

Urban population growth is changing the dynamics of food, energy, water and land consumption.



RESOURCE CONSTRAINTS

Natural resource scarcity like energy and water is pressuring food supplies, health and wellness, and general infrastructure.



CLIMATE CHANGE

The world is becoming warmer with more unpredictable weather patterns and record greenhouse gas emissions.



WORKFORCE DYNAMICS

Aging populations, shifting demographics and digital connectedness are reshaping the global workforce.

At Trane, we believe it is our duty to help protect the global environment we all share. Our equipment supports our company commitment to sustainability and energy intensity reduction. Through our bold 2030 sustainability targets, we are meeting the challenge of climate change, providing world-class products, systems and services for our customers and enhancing the quality of life where we live and work.

Learn more at trane.com/sustainability

This Brochure includes "forward-looking statements" within the meaning of securities laws, which are statements that are not historical facts, which include, but are not limited to, statements regarding our water-cooled chiller product portfolio, our 2030 sustainability commitments and the anticipated impact of these commitments.

These forward-looking statements are based on our current expectations and are subject to risks and uncertainties, which may cause actual results to differ materially from our current expectations. Factors that could cause such differences can be found in our Form 10-K for the year ended December 31, 2023, as well as our subsequent reports on Form 10-Q and other SEC filings. New risks and uncertainties arise from time to time, and it is impossible for us to predict these events or how they may affect the Company. We assume no obligation to update these forward-looking statements and no undue reliance should be placed on any forward-looking statements.



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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