Water-Cooled Chillers

A full portfolio of solutions for comfort and process applications

TRANE TECHNOLOGIES

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

Recognizing the opportunity to reduce energy intensity and environmental impact, Trane® has enhanced its portfolio of water-cooled chillers to improve efficiency and lower operating expenses.

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.

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

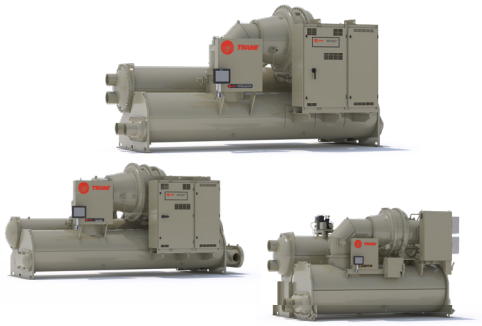
- CenTraVac® centrifugal chillers provide the lowest total energy cost of ownership in the Trane water-cooled portfolio by delivering industry-renowned reliability and efficiency.
- Agility® magnetic bearing centrifugal chillers offer a great balance of efficiency, reliability, and low installation costs through compact size and bolt-together design.
- Series R™ helical rotary screw chillers deliver the lowest installed costs in the Trane water-cooled portfolio, while providing the flexibility, reliability and efficiency your application requires.

Trane innovation is advancing the industry into the next generation of thermal management. Let's go beyond.

Read on to see which Trane water-cooled chiller model is right for your project »

CENTRIFUGAL

CenTraVac® Product Family

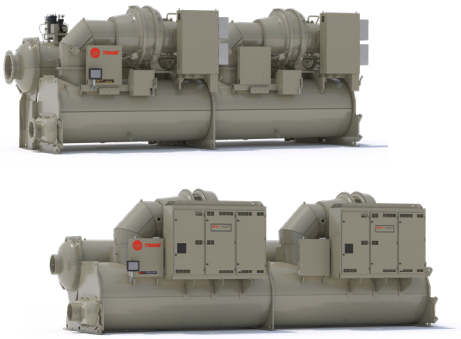


CenTraVac Water-Cooled Centrifugal Chillers

The low-pressure, direct-drive, multistage design helps deliver better efficiency compared with traditional single-stage centrifugal chiller designs.

CAPACITY: 200 to 2,000+ tons, 60/50 Hz

Models CVHE, CVHF, and CVHH



Duplex® CenTraVac Water-Cooled Centrifugal Chillers

With a series counterflow design and dual independent refrigerant circuits, the Duplex chiller helps reduce energy consumption compared to other single-compressor units.

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

Models CDHF and CDHH

Agility® Product Family

Agility Magnetic Bearing Centrifugal Chiller

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

CAPACITY: 175 to 500 tons, 60 Hz

Model HDWA

HELICAL ROTARY SCREW

Series R™ Product Family

Series R Helical Rotary Screw Chillers

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

CAPACITY: 80 to 400 tons, 60 Hz

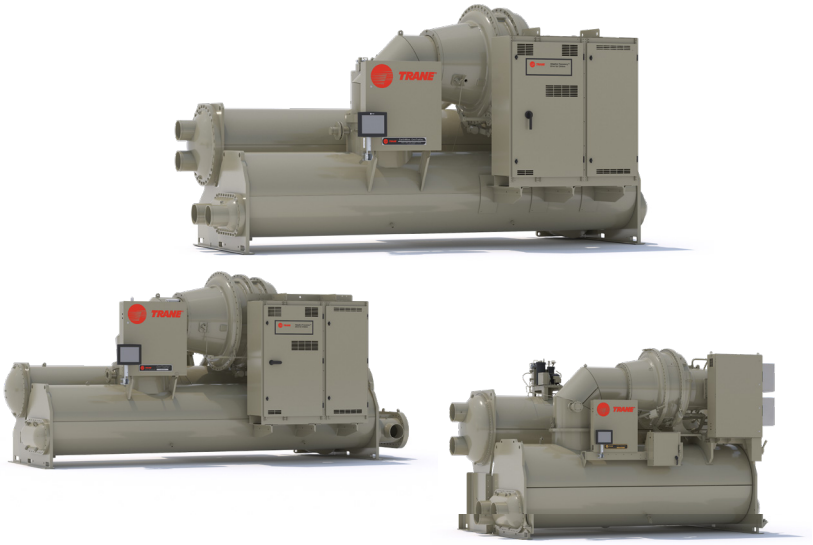
Models RTHD and RTWD

CENTRIFUGAL

CenTraVac® Water-Cooled Centrifugal Chillers

Models CVHE, CVHF and CVHH

Centrifugal chillers with industry-renowned efficiency and reliability.



At a glance

- Semi-hermetic motor design, along with low-pressure refrigerant, helps provide low refrigerant leak rates
- 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

Overview

Trane® CenTraVac chillers feature a time-tested and proven low-pressure design utilizing environmentally friendly refrigerants R-514A and R-1233zd. They offer low pressure in a leak-tight design. Available in a wide range of cooling capacities, CenTraVac chillers provide from 200 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 gives the CenTraVac compressor more reliable and efficient operation, along with low sound and vibration levels.

Specifications

Capacity Range: 200 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

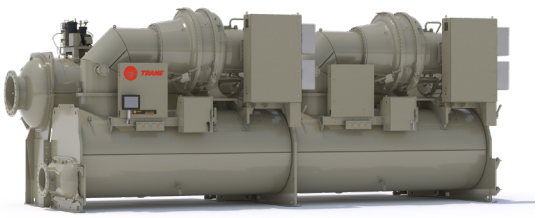
Factory-installed Optional Features: Heat recovery, ice making, free cooling options, variable frequency drives, mechanical starters

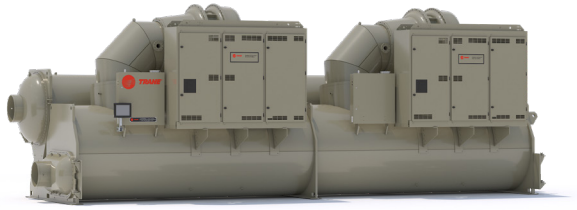
CENTRIFUGAL

Duplex® CenTraVac® Water-Cooled Centrifugal Chiller

Models CDHF and CDHH

A reliable, large-capacity option with next-generation refrigerant.





At a glance

- Semi-hermetic motor design, along with low-pressure refrigerant, helps provide low refrigerant leak rates
- 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
- 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 exceptional efficiency. The Duplex design not only helps reduce energy consumption compared to a single compressor unit, but also offers increased energy savings when paired in a series configuration.

The direct-drive compressor helps deliver reliability through simplicity of design and fewer moving parts while enabling industry-renowned efficiencies, along with low sound and vibration levels. The semi-hermetic motor operates in a cool and clean environment, helping to extend the life of the chiller and reducing the heat that would otherwise impact the mechanical room. The multistage compressor assists with providing stable and reliable operation across a wider range of operating conditions.

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 18.5°F (-7.5°C); low-, medium- and high-voltage offerings

CENTRIFUGAL

Agility® Magnetic Bearing Centrifugal Chiller

Model HDWA

Exceptional performance in a compact footprint.

At a glance

- Operates with 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 (34 in. x 80 in.), making it ideal for retrofitting existing buildings
- Utilizes oil-free magnetic bearings with enhanced compressor speeds
- Operates at a medium pressure, which allows it to occupy a smaller footprint

Overview

The Agility water-cooled chiller provides impressive performance with a compact size and 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 full-load and Integrated Part Load Values (IPLV) that outperform the ASHRAE® 90.1-2022 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 500 tons, 60 Hz

Refrigerant: R-513A

Compressor Design: Centrifugal

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

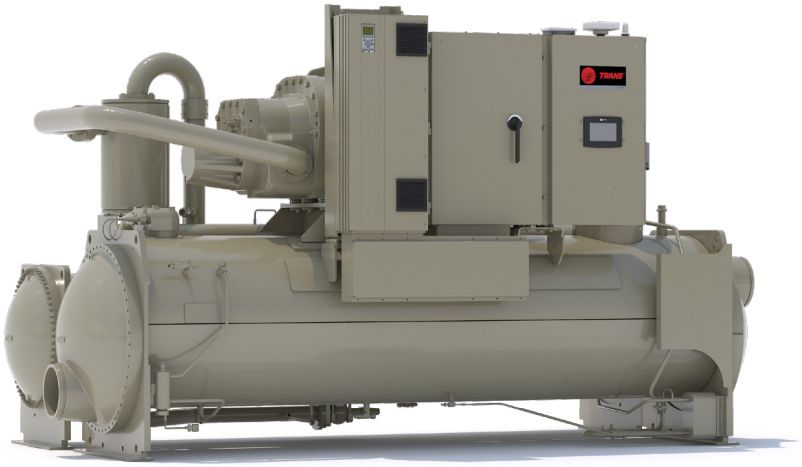
Factory-Installed Optional Features:
Ice making, heat recovery, harmonic filter, belzona coating, marine waterbox

HELICAL ROTARY SCREW

Series R™ Helical Rotary Screw Chiller

Model RTHD

Adds value while delivering long-term benefits.



At a glance

- Symbio® 800 controller enhances equipment performance and enables 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, can 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 versatility 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

Factory-Installed Optional Features: Heat Recovery, Ice Making, Adaptive Frequency Drive

HELICAL ROTARY SCREW

Series R™ Helical Rotary Screw Chiller

Model RTWD

Expanded heating capabilities for boiler replacement with reliable performance and versatility.

At a glance

- Utilizes R-515B refrigerant 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.

RTWD utilizes R-515B refrigerant for heating applications, which is capable of delivering hot water temperatures of up to 165° F (74° C), making it ideal for electrified heating applications. RTWD 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.

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

Factory-Installed Optional Features: Heat Recovery, Ice Making

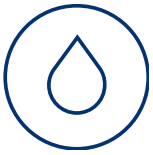
2030 Sustainability Commitment

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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