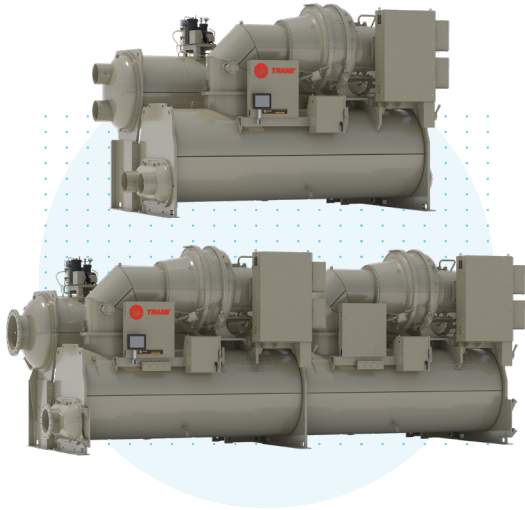


# CenTraVac<sup>®</sup> Water-Cooled Centrifugal Chillers

CVHH & CDHH



## Simplex Chiller (Single Circuit)

850-2,000 tons (9,600 - 30,000 MBH); 50Hz, 60Hz

Model CVHH

## Duplex<sup>®</sup> Chiller (Dual Circuit)

1,800-4,000+ tons (24,000 - 60,000 MBH); 50Hz, 60Hz

Model CDHH

## Innovative Solutions for Your Decarbonization Journey

Trane<sup>®</sup> is dedicated to supporting your efforts in decarbonization. As the global focus shifts towards improving heating and cooling efficiency, enhancing the use of natural resources, and protecting our environment, building owners, engineers, and architects are seeking ways to reduce both immediate and long-term environmental impacts. With the CVHH and CDHH CenTraVac models, Trane offers highly efficient HVAC systems that provide environmental advantages.

## CenTraVac Chiller Design Advantages

Our focus on reliability, efficiency and system versatility is achieved through our fundamental design choices. The direct drive compressors used on the CVHH and CDHH models deliver reliability through simplicity of design and fewer moving parts, resulting in better efficiency and lower levels of sound and vibration. The semi-hermetic motor operates in a cool, clean environment, extending the life of the compressor and eliminating heat that would otherwise impact the mechanical room. The multi-stage compressor provides stable and reliable operation across a wider range of operating conditions, and the low-pressure design enables some of our lowest documented refrigerant leak rates. Factory testing is available to verify performance under customer-defined conditions, providing additional peace of mind.

For larger cooling capacities, the CDHH model extends the proven CenTraVac design to more than 4,000 nominal tons. Duplex CenTraVac chillers utilize a series-counterflow design with two independent refrigerant circuits that leverage thermodynamic staging to deliver industry renowned 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.

## Next-Generation Refrigerant

CenTraVac chiller models CVHH and CDHH utilize R-1233zd, a next-generation, low-GWP refrigerant. Classified as an "A1" refrigerant per ASHRAE<sup>®</sup> Standard 34, R-1233zd has a GWP of 1 and is one of the few non-flammable olefin options available today. Performance enhancements in our R-1233zd CenTraVac portfolio deliver an expanded capacity range and an efficiency shift to better serve large cooling capacity needs, such as district cooling applications, as well as offering heat recovery capabilities up to 140°F (60°C). These advancements help our customers meet their sustainability goals by reducing environmental impact and improving energy efficiency.

## EcoWise<sup>™</sup>

CenTraVac chillers are a part of the Trane Technologies<sup>™</sup> EcoWise portfolio of products designed to help lower environmental impact through high efficiency operation and the use of a next-generation, low global warming potential (GWP) refrigerant.

» *Trane's focus on decarbonization has helped advance the industry with the CenTraVac Duplex model CDHH's third-party verified Environmental Product Declaration.*

# CenTraVac® Chiller Options and System Enhancements

CenTraVac chiller models CVHH and CDHH leverage proven technology to help deliver stable operation under a variety of conditions. These chillers incorporate advanced design features and innovative controls to enhance performance and efficiency. They are engineered with a range of energy-saving options that assist with benefiting both the environment and operational costs.



## Adaptive Frequency™ Drives

Enhance chiller efficiency at reduced loads with the fully integrated variable-speed drive. This advanced drive works with the chiller motor and Symbio® 800 controller to continuously match compressor speed to required levels for operation at peak efficiency.



## Symbio® 800 Equipment Controller

The Symbio 800 controller features pre-programmed sequences of operation to help offer seamless performance. It also enables connectivity with the Tracer® SC+ building automation system for even more system enhancement.



## Thermal Energy Storage

When coupled with thermal energy storage (TES) tanks, CenTraVac chiller models CVHH and CDHH can be used during off-peak hours to create ice, which is then stored in modular tanks for use in cooling during peak hours the following day.



## Heat Recovery

CenTraVac chiller models CVHH and CDHH offer integrated partial or full heat recovery up to 140°F (60°C). With heat recovery, the chiller can recover heat rather than rejecting it, providing hot water and tight temperature control that lowers operating costs by reducing boiler/hot water heater usage.



## Free Cooling

By adding a free cooling valve, CenTraVac chiller model CVHH can utilize refrigerant migration to provide cooling up to 45 percent of the nominal chiller capacity without running the compressor. This is ideal for climates with cooler wet-bulb temperatures where a cooling load is present, applications with elevated leaving chiller water temperatures, and settings where heat is rejected into a river, lake, or pond.



## High Efficiency Tubing

Enhanced tubes have greater surface area where heat can be transferred from one side of the tube to the other, and they provide more fluid turbulence. External enhancements suit the refrigerant properties and the application (boiling or condensing), while internal enhancements improve fluid flow.

To learn more about the comprehensive capabilities of our CVHH and CDHH CenTraVac chillers, visit [Trane.com/CenTraVac](https://Trane.com/CenTraVac) or contact your Trane Account Manager.



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](https://trane.com) or [tranetechnologies.com](https://tranetechnologies.com).

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