CenTraVac™ Chillers with R514A

- Simplex (single compressor) model CVHF
- 350-2000 tons (1200-7500 kW)

The most efficient and reliable centrifugal chillers on the planet.

As part of the EcoWise portfolio of products, CenTraVac chillers are designed to utilize next generation R514A refrigerants with a Global Warming Potential (GWP) value of 2 — among the lowest in the industry.

A leader from the start

Trane has been the leader in chiller innovation since 1938. Decade after decade, CenTraVac technology has advanced to meet a variety of challenges, and we will continue to lead the industry into the next generation of cooling.
Trane CenTraVac™ centrifugal chillers provide the lowest possible cooling costs, while delivering significant environmental benefits.

Most reliable

Through simplicity in design, Trane centrifugal compressors achieve the industry's highest design reliability rating of 99.7 percent.
CenTraVac is capable of sustaining the precise temperatures at extremely tight tolerances that are key to occupant comfort and crucial to many demanding mission-critical processes.
Built to last for decades — with some chillers operating for more than 50 years — and with the industry's fewest moving components, CenTraVac excels even in the most challenging cooling applications.

Design Advantages

The direct drive compressor delivers unmatched reliability through simplicity of design and fewer moving parts. It also contributes to industry-leading efficiency levels by eliminating losses associated with gears, transmissions or shaft seals, while delivering the lowest sound and vibration levels.

The semi-hermetic motor operates in a cool and clean environment, extending the life of the chiller and eliminating the heat that would otherwise impact the mechanical room. The multi-stage compressor enables stable and reliable operation across a wider range of operating conditions, and the low pressure design enables a near-zero refrigerant leak rate.

Next-generation refrigerants

Environmental sustainability is at the heart of CenTraVac™ design. Low pressure refrigerants operate in a vacuum, which virtually eliminates leaks and enables near-zero emissions throughout the operational life of the CenTraVac chiller. We chose refrigerants based on their overall impact on the environment, taking into consideration ozone depletion potential (ODP), global warming potential (GWP) and energy efficiency. This enables our chillers to be environmentally sustainable without compromising reliability, cost savings or safety.

Trane CenTraVac makes use of next generation HFO R514A, with <2 GWP,with no ozone depletion, an atmospheric lifetime of 20 days.

Adaptive Frequency™ Drives (AFD)

Adaptive Frequency™ Drives control the operating speed of the chiller compressor motor by regulating output voltage in proportion to output frequency. Varying the speed to optimize the performance of the compressor can take advantage of part lift conditions that translate into significant energy savings with minimal starting current.

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.

Tracer AdaptiView™ Controls

Providing the intelligence behind CenTraVac chillers, Trane Adaptive Control™ strategies respond to a variety of conditions to maintain efficient chiller plant operation for all applications, with patented control algorithms that maximize performance in variable primary flow systems. The open protocol design works with any building automation system without the need for gateways (BACnet®, Modbus RTU and LonTalk®).

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