

Centrifugal Liquid Chiller

The answer for today's concerns





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Trane has been designing and manufacturing water-cooled centrifugal chillers since 1938. There are over 45,000 Trane centrifugal chillers in operation around the world today.

For customers seeking a design specifically for operating with HFC 134a refrigerant, and for comfort or industrial cooling applications, Trane has the model CVGF to offer. It is ideal for office buildings, hospitals, schools, retailers, and industrial facilities.

The CVGF centrifugal chiller is completely factory assembled and runtested before shipment.

Trane offers a factory chiller "witness test" to the building owner and consulting engineer before shipment.

The key to any success story is longterm system performance. Trane's model CVGF chillers are built for reliable operation. Trane can provide strong support for its equipment including start-up, parts, service training, and warranty support.

Reliability.

With tens of thousands of centrifugal installations world-wide, Trane has proven the know-how for the design of reliable chillers. In developing the CVGF, Trane kept the same philosophy which made its success:

The CVGF uses the latest heattransfer surface technology.

- Liquid refrigerant cooled motor for a longer motor life. The motor is surrounded by liquid refrigerant. Use of liquid refrigerant results in uniform low temperatures throughout the motor.
- Calibrated fixed-orifice refrigerant expansion system free of moving parts to ensure efficient and reliable evaporator operation under all operating conditions.
- Simple and reliable integral lubrication system.

Efficiency.

The power consumed by the chillers is becoming more and more an important factor in the decision on the choice of a chiller. The goal of the development of the CVGF was to propose an efficient unit by adding new features to an

Tracer[™] Summit

Building Control

compatible.





The UPC2 Adaptive Control Microprocessor keeps the chiller running during extreme operating conditions. All of the information is displayed in many different languages.

Two-stage compressor minimizes surge. Interstage economizer to increase the system efficiency.

Refrigerant-cooled motor for a longer operating life.

already proven technology:

- Interstage economizer to increase the system efficiency, by injecting refrigerant gas into the second compressor stage.
- The evaporator uses a patented new refrigerant distribution system.
- The latest heat-transfer technology is used in both evaporator and condenser.
- Optimized inlet-guide vanes and impellers for improved cycle efficiency.

Control.

Trane has developed over 30 years of expertise in terms of control and communication. The CVGF can offer 3 control levels :

The UCP2 is the most advanced unit control on the market. The Adaptive Control ensures safe operation and keeps the chiller on line.

- The Tracer Summit Building Control Unit provides automation and energy optimization of the chiller plant.
- Tracer Summit PC Workstation provides global control and serves as a communication link between the operator and the building management panel. The operator has the ability to create and edit system databases, acknowledge alarms, and perform other operator transactions from the PC workstation.

ODP.

Refrigerant 134a used in the CVGF chiller is a chlorine-free refrigerant with an Ozone Depletion Potential (ODP) equal to zero. But the ODP is not the only thing to consider. The greenhouse effect of the unit is also an important factor. The CVGF is the unit designed for minimizing direct and indirect greenhouse effects.

The direct effect is reduced by:

- Developing a new refrigerant distribution system which reduces the amount of refrigerant.
- Developing a new oil sump, integrated into the compressor/ motor, which eliminates vent and drain lines and therefore risk of leaks.
- Reducing the number of joints by 30% over previous design.
- Using beaded flat-gasket technology instead of O-rings for lowering susceptibility to develop leaks.

The indirect effect is reduced by increasing the unit efficiency. A better efficiency means less kW consumed.





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

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Since The Trane Company has a policy of continuous product improvement, it reserves the right to change design and specifications without notice.

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