



TRANE®

Trane Horizon™ Absorption Series Two-Stage Steam-Fired Absorption Water Chillers, 380 to 1650 Tons

Made in the USA

Trane has been manufacturing absorption chillers for more than three decades. The newest line, the Trane Horizon™ two-stage steam fired absorption water chiller is the only line of two-stage absorption products designed, built and supported in the USA.

A Good Environmental Choice

The Trane Horizon absorption chiller is a wise choice for owners concerned about the environment. Water being the base refrigerant means fewer concerns about refrigerant management and availability.

Absorption technology reduces the requirement for electric energy. The steam-fired design allows the machine to be fueled by waste heat or available steam. This contributes to the conservation of the world's fuel resources and makes economic sense.

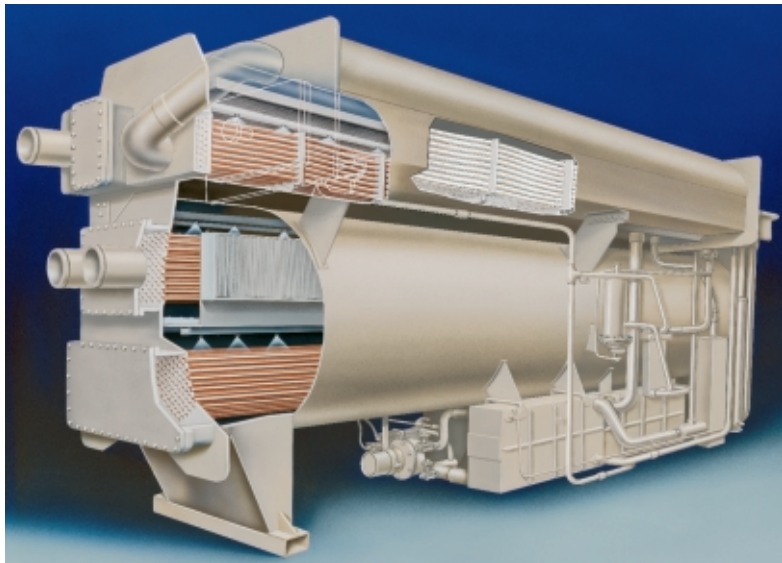
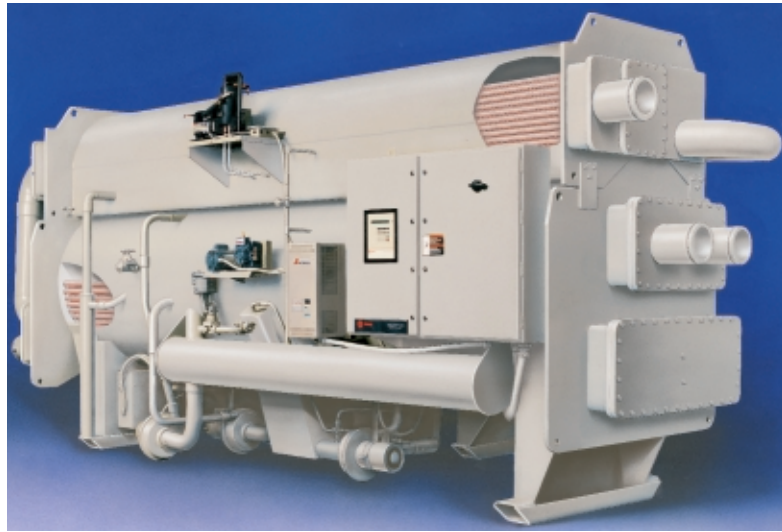
Quality

Trane uses the highest quality materials available to resist corrosion and extend the chiller's operating life. Additionally, the absorption chiller manufacturing facilities in La Crosse are ISO 9001 certified to help deliver high quality in design, development, production and product records.

Efficient Operation

Trane's unique absorption *Reverse Series Cycle* can be as much as 5-15 percent more efficient, at full load conditions, than other absorption cycles. In addition, the microprocessor based control (UCP2), along with variable speed pumps, optimizes the machines performance to provide significant operating cost savings at partload operation.

The Purifier™ purge, provided as standard on all Horizon absorption chillers is fully automatic and maintains efficient chiller operation. The Purifier purge removes air and other noncondensibles that have filtered into the system. And since Purifier purge communicates with the UCP controller, the chiller controls can take appropriate action to protect the machine when air is present.



Automatic Crystallization Protection

Crystallization is the solidifying of the chiller's lithium bromide solution into salt crystals. The salt crystals, if undetected, can restrict the flow of solution and cause a chiller failure that is difficult to correct.

Trane's automatic crystallization protection system can sense, detect and recover (SDR) the onset of crystallization. If the chiller's flow pattern becomes restricted, the SDR control capability enters a recovery mode of operation, reestablishing the flow pattern, preventing crystallization.

Increased System Efficiency

The Horizon absorption chiller can optimize the total system efficiency and lower initial equipment costs. Designed around 3.6 gpm/ton cooling tower water flow, the two-stage design is lower than ARI's 4.0 gpm/ton standard for absorption chillers. Lower gpm's through the condenser and absorber section gives the design engineer the opportunity to downsize the cooling tower and cooling tower pumps. This means lower equipment costs and reduced chiller plant electrical usage.

Efficient Pump Drives

In the Horizon machine, absorption solution flow is controlled by adjustable frequency drives on the pump motors. The drives allow the chiller to react to changing conditions up to ten times faster than other absorbers. The UCP2 control system maintains efficient pump operation during chiller start up, operation and shutdown phases. This increases unit reliability and reduces maintenance expense.

Designed for Easier Installation, Start-up and Service

The many user-friendly features designed into the Horizon absorption chiller are a collection of ideas and comments from absorption chiller owners and operators over the past 35 years. Second to reliability, ease of installation and maintenance are also important to Trane customers.

All Horizon chillers ship fully assembled for fast installation. However, the new modular design allows the chiller to be disassembled at the job site for applications with limited access.

To make annual tube cleaning easier and less costly, all Horizon chillers include marine-style waterboxes on the cooling water circuit. The boxes serve as a leak tight, removable cover for easy accessibility into the chiller shells.

Standard Specification

- 1.2 COP at ARI standard rating conditions
- Victaulic™ water connections
- Industrial-grade tubes unmatched in the industry
 - First stage generator - 409 stainless steel
 - Second stage generator - .028" wall 95/5 CuNi
 - Evaporator - .028" wall copper
 - Absorber - .022" wall 95/5 CuNi
 - Condenser - 0.28" wall copper
- Factory mounted and tested microprocessor controls
- 150 psig waterboxes marine style on the condenser and absorber sections
- Cooling water crossover pipe factory installed between the absorber and condenser
- Connections and valves are provided as standard for lithium bromide filter
- Industrial duty factory mounted energy valve

Optional Specification

- 150 psig raised face flanges for the evaporator, condenser, and absorber water connections
- Dissassembled unit — providing for easy disassembly and reassembly of major components at the jobsite.
- Lithium bromide filter
- Factory installed cold insulation
- Field installed hot insulation

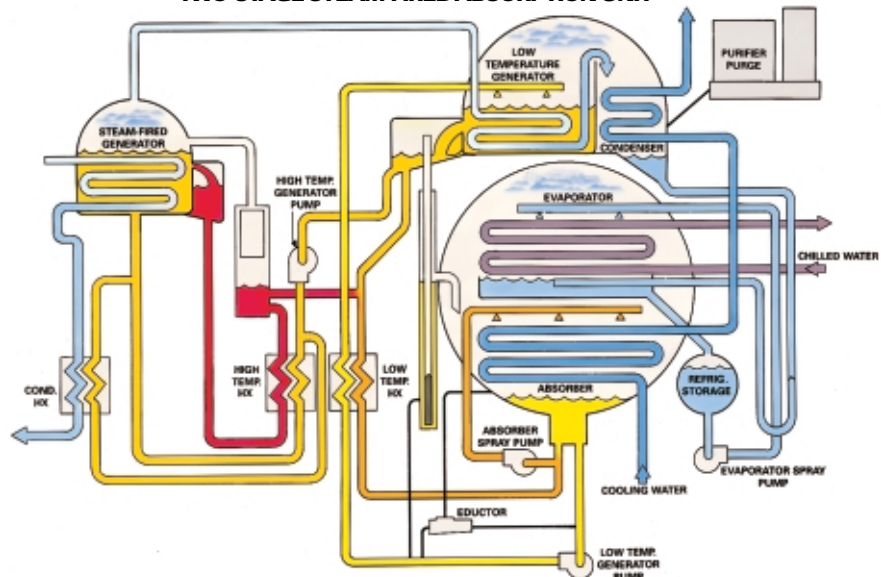
Serviceability

- All tubes individually replaceable
- Removable absorber, evaporator and generator spray tree systems
- Marine style waterboxes on absorber and condenser allowing tube cleaning without removing water connections
- Training of owner's operating personnel
- Quality post-warranty service from trained technicians
- Parts readily available
- Local trained service personnel that are backed by headquarters experts
- Customizable extended warranty plans

Controls

- Improved reliability and performance
- Factory installed and commissioned
- Proportional integral derivative (PID) control. Adaptive Control™ strategies for stable, efficient, reliable, and optimal chilled water temperature control
- Easy-to-use operator interface
 - Two line 40 character backlit LCD display in clear language
 - English or SI units
 - Standard and custom reports
 - Over 200 diagnostics including time and date stamping

TWO-STAGE STEAM-FIRED ABSORPTION UNIT



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

ABS-S-10
Revised
May 2000