

**Tracer™ controls and display:
State-of-the-art control system**

User-friendly *Tracer™ UC800 controls*, with the *Tracer™ TD7 Color Touch Screen Display* and BACnet™ or LonTalk® capabilities simplify the operation of RTHD with AFD chillers. The Adaptive Control™ microprocessor monitors operation of the chiller and keeps it running during extreme operating conditions, when other controllers would typically shut the machine down.

The 7-inch color touch screen display—intuitive graphical user interface for the Tracer UC800, is designed for both indoor and outdoor use. The LCD touch-screen provides easy access to inputs and outputs, and all operating information and reports are viewed using a scrolling display.

- Displays status, alarms, data logs, and graphics
- Local schedules and manual override capability
- Suitable for indoor and outdoor use

The TD7 display combined with the advance UC800 controller is a highly adaptable, stand-alone chiller unit control with interfacing capabilities and interoperability with system-level and building automation controls.



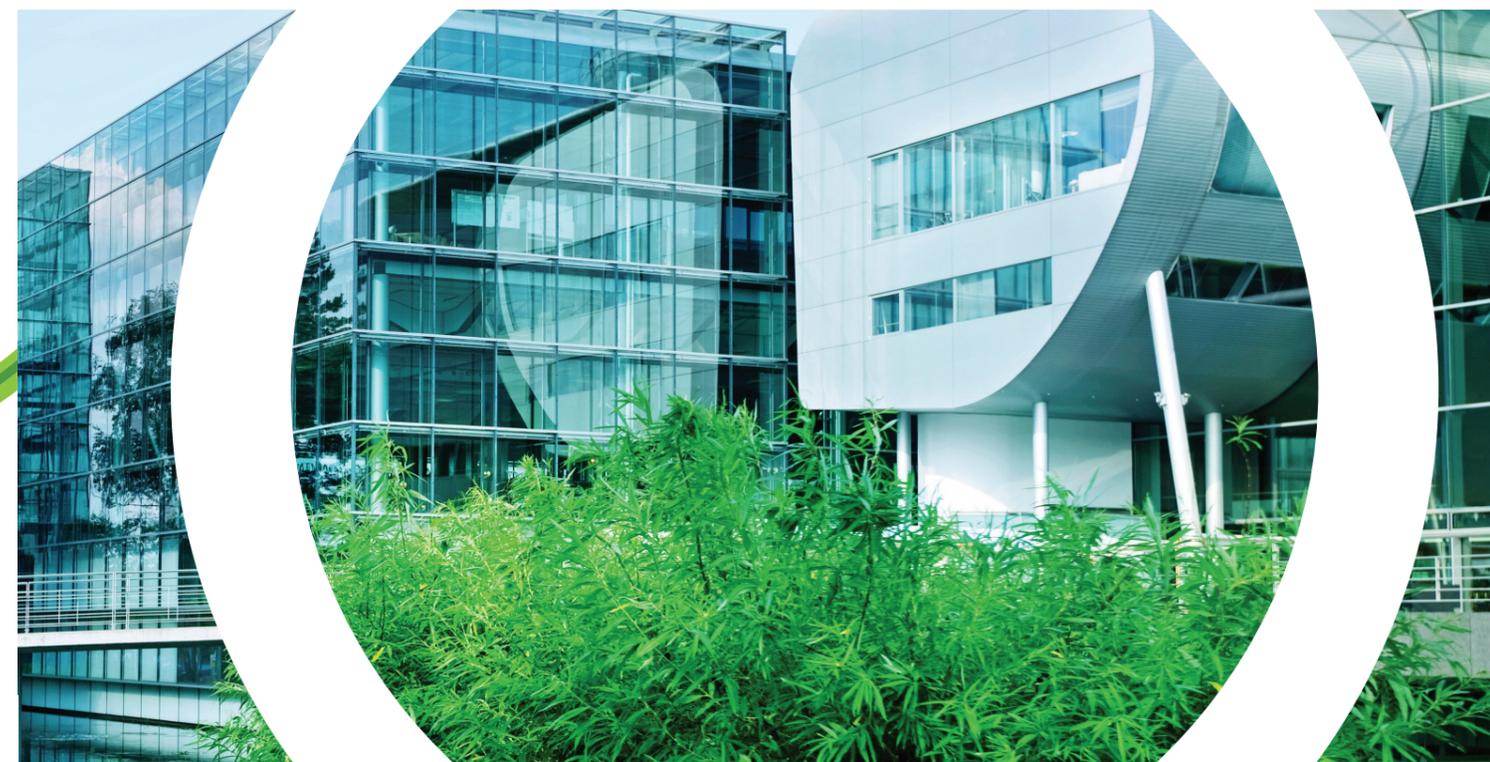
Trane® Series R™ helical rotary chiller

Model RTHD with
Adaptive Frequency™ drive
150 – 425 (50Hz)
175 – 450 (60Hz)



**EarthWise™ systems:
Responsible for the long run**

Trane EarthWise™ systems offer the best of all worlds: Its cooling technology improves energy efficiency and reduces emissions, while driving down costs for building owners. Designed around an energy-efficient Trane chiller—such as AdaptiR™ RTHD with AFD—and performance-optimizing controls, EarthWise systems use smaller fans, narrow ductwork, fewer pumps and less plumbing. This reduces initial material costs and lowers long-term operating costs. Trane builds EarthWise systems to deliver responsible cooling, and sustains their performance through a full lifecycle of building services.





Superior part-load energy efficiency with unrivalled quietest performance

Trane's legacy of providing innovative products, systems and services has been engineered to meet our customers' needs for the past hundred years. Trane's Series R water chiller, first introduced in 1987, reflects this commitment. It featured Trane's latest advancement in compressor technology - a helical-rotor design - and was specially developed for the growing replacement and renovation markets.

Today, *Trane® Series R™ Helical Rotary Liquid Chiller (RTHD) with Adaptive Frequency™ Drive (AFD)* promises to deliver industry-leading superior part-load efficiencies with unrivalled silent performance for the medium-tonnage, water-cooled market. It provides a wide range of applications which experience changing load demand such as commercial and office buildings, hotels, hospitals etc.

The new RTHD chiller **inherits proven Series R performance**, plus all the **advantages of improved AFD, bringing to you:**

- Energy efficiency
- Quietest performance
- Application versatility
- Ease of installation
- Control precision
- System reliability
- Operational cost effectiveness
- Drive longevity
- Water temperature control
- Customised efficiency



Outstanding chiller performance

RTHD with AFD achieves first-cost and on-going operational cost savings in real-world applications, based on the proven technology of RTHD, which in its fourth generation, remains one of the most robust chiller models on the market today.

- Improved part-load energy efficiency reduces operating and lifecycle costs. When compared to standard constant-speed chiller designs, RTHD with AFD offers a part-load efficiency improvement of **20-35%** while maintaining the same COP efficiency level. This will typically result in an annualized energy savings of **10-15%** in chiller energy consumption, giving a Return On Investment (ROI) with payback between 2 to 5 years.
- RTHD with AFD offers high reliability with wide modulation range, with stable unloading down to **20%**.
- The "harmonics" impact on the grid has always been a concern of variable frequency drive application. Trane AFD is integrated with a DC-link reactor to minimize line harmonics; and the low harmonic filter is optional to meet IEEE 519 with input of AFD, thus further reducing the impact on the grid. In addition, Trane AFD soft-start minimizes inrush current, thereby protecting other electrical or electronics devices sharing the same power grid.
- RTHD with AFD features low sound pressure level in part load. The reduced speed during part-load significantly reduces sound level during part-load operation. The quiet performance brings a comfortable environment to the chiller plant, making it a perfect choice for those noise sensitive installations such as libraries, schools, hospitals etc.
- It has reduced sensitivity to water temperature, hence alleviating startup concerns.



The increased efficiency and reduced refrigerant charge of a RTHD with AFD chiller can help earn multiple US Green Building Council LEED® (Leadership in Energy and Environmental Design) points for your building in pursuit of LEED Certification, also potentially gaining rebates and incentives offered by some utility companies.

- Its advanced design enables chilled water temperature control to $\pm 0.5^\circ\text{F}$ (0.3°C), which in turn allows more precise humidity control.
- Its flexible evaporator and/or condenser arrangements and other chiller features enable you to specify the level of efficiency that is best for your system, building and operations.



Easy installation

- RTHD with AFD fits through a standard double-door frame with an easily dismantable AFD panel. For extremely tight installations, the standard bolt-together design allows quick and easy site disassembly and re-assembly.
- Trane AFD with reliable design is unit-mounted and pre-wired to reduce field set-up work.



Simply reliable and virtually maintenance free

The key to RTHD with AFD reliability is its design simplicity. It has very few major moving parts.

- Direct-drive, low-speed, semi-hermetic compressor has only three moving parts.
- Semi-hermetic design enables the compressor motor to operate in a cool, clean environment.