



Making Buildings Better

Commercial Products
and System Solutions





The Trane Difference

Our People

The power of our people, products and experience fuels the growth of new technologies and services to create significant value for our customers. For more than 100 years, Trane has been utilizing innovative approaches to make buildings all over the world perform better.

Our Knowledge

Turning building systems into business advantages requires extensive knowledge of HVAC applications, system design and controls—Trane system and application knowledge is second to none. Trane is one of only a few in the industry that engineers nearly all HVAC system components—equipment, unit and system controls and applications—to sustain a high performing building for life. And our industry involvement allows us to extend that knowledge to advocate for improved sustainability practices and reduced energy use worldwide.

Our Systems

Trane has been helping customers design the most cost-effective, highest-performing systems for decades. Our system design approach leverages Trane equipment, controls and applications expertise to deliver superior building performance at a lower operating energy cost. Our customers need open system solutions that are flexible to facilitate the integration of a variety of different building equipment and systems. The EarthWise™ system approach is just one example that delivers flexible, pre-packaged control strategies coupled with high-efficiency equipment to deliver high-performance buildings for life.

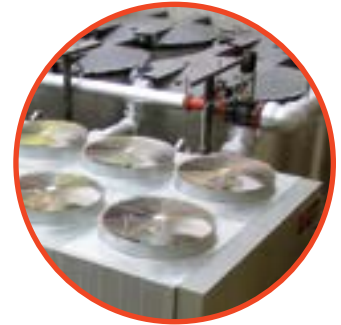
Our Promise

“A relationship built on trust that can stand the test of time.” It’s a simple promise, but a powerful one. By committing ourselves to the best interests of the customers we serve, Trane builds the trust that’s necessary for enduring relationships—which is why we provide HVAC solutions for the life of a building and the people in it. A life that has unique needs. A life that changes over time.

Trane. Making buildings better ... for life.

Making Buildings Better ... for Life

From initial design concept to recommissioning and upgrades — and everywhere in between — Trane has the equipment, controls, services and expertise to create a solution that's right for your building.



Plan/Design

Every building has a purpose. Trane collaborates with design teams to ensure that the mechanical systems specified are ideally suited to deliver long-term cost and performance benefits, based on the purpose of the building and the mission of your organization.

Construct

Critical building systems must work together. Whether it's turnkey contracting or startup and commissioning, Trane can manage the design and integration of building systems to optimize energy efficiency and overall performance.

Operate/Maintain

Operating costs account for approximately 50 percent of a building's total life-cycle budget.* Trane can help turn your building into a strategic business advantage by helping you operate efficiently and manage maintenance costs. Trane Service and Performance Contracting are flexible to suit your needs and financial realities.

*ASHRAE (CABA Bright Green Buildings Report)

Renew

Sustainable efficiencies for the life of the building. Over the years, parts begin to wear down and technologies become outdated. Building usage patterns change and equipment and system performance can degrade. Trane has the expertise to renew and upgrade building mechanical systems in a timely, affordable manner that does not compromise your business mission.

Trane Technologies Climate Commitment

Our climate commitment increases energy efficiency and reduces the greenhouse gas (GHG) emissions related to our operations and products including:

- 50 percent reduction in direct GHG potential of our products by 2020, and incorporating alternatives with lower global-warming potential across the Trane Technologies product portfolios by 2030.
- \$500 million investment in product-related research and development over the next five years to fund the long-term reduction of GHG emissions.
- 35 percent reduction in the GHG footprint of our own operations by 2020.

EcoWise™

Portfolio of products designed to lower environmental impact with next-generation, low global-warming potential refrigerants and high-efficiency operation.

EarthWise Systems

The EarthWise Philosophy

EarthWise™ is a comprehensive approach to HVAC system design that supports what's best for your building, right for the environment and good for your bottom line. EarthWise systems share four principles: high efficiency, low emissions, sustainable building performance and documentation.

Trane EarthWise systems leverage high-efficiency HVAC equipment and advanced building controls in a complete design concept that optimizes the system and performance. These systems deliver documented operational efficiencies that are repeatable and sustainable.

Why Reinvent the Wheel?

It's obvious that an applied system's design and operation should be driven by what we know works. Tapping into the collective capabilities of pre-programmed controls and pre-engineered system packages reduces risk, complexity and engineering costs. The repeatability of each system minimizes custom programming, reduces installation and commissioning errors and simplifies maintenance across many installed systems. But the benefits don't stop there: The use of optimized components leads to systems with the lowest life-cycle costs.

With every EarthWise system, Trane provides, supports and deploys energy modeling during the initial development phase to help guide design choices. Trane Air Conditioning Economics (TRACE™) software can be used to determine whether these systems can be expected to earn high-performance designation.

Advanced Control

A variety of pre-configured tools makes EarthWise systems easy to design, commission and operate. Graphic interfaces include system operation overview, at-a-glance gauges and configuration screens. Design support documents include control drawings, I/O point summaries and sequences of operation.



Documented, sustained efficiency for the life of the system.

Recognizing that the electrical meter is for the building, not just individual equipment, Trane EarthWise systems combine high-efficiency HVAC equipment, enlightened system designs and advanced controls to optimize whole system design and operation. Complying with standards — and documenting that compliance — is simple with an engineered EarthWise system from Trane.

Intelligent Variable Air System

Proven performance, with advanced technology. *Be flexible and comfortable without wasting energy.*

Available for either chilled water or packaged DX applications, a Trane Intelligent Variable Air System saves energy, while reducing installation cost and time. New technologies and optimized controls come together to make this system 20 to 30 percent more efficient than a traditional VAV system. Wireless technology, retrofit dampers and pre-packaged controls allow you to quickly and easily upgrade an existing system, with minimal occupant disruption.

The system includes pre-packaged, optimized controls to reliably deliver energy savings, with interactive operator dashboards to demonstrate real-time savings. Intelligent analytics are available to identify efficiency improvement opportunities, helping to sustain a high level of performance for life.



Low Temperature, Low Flow, Chilled Water System

More than the sum of its parts. *Look inside and outside the chiller flanges for world-class performance.*

It's easy to design a system that makes the chiller look good. But we know the meter is for the building, and thus all components in the system must operate at their most efficient manner possible to minimize overall system energy use.

This system includes configurations, design strategies, advanced controls and dashboards to unlock the full benefits of a chilled-water system.



Ice-Enhanced Air-Cooled Chiller Plant

Reduces cost. *Generate cooling during lower-cost, off-peak hours for use later during peak periods.*

The concept of thermal energy storage is not new. The Trane EarthWise ice-enhanced air-cooled chiller plant makes it simpler and repeatable.

The system includes standard configurations for chillers, ice tanks, pumps, valves and hydronic specialties, with customized system controls and dashboards that show you how the system operates, and how much it saves.



Central Geothermal Systems

The best of both worlds. *Enjoy the energy efficiency advantages of a geothermal installation along with the performance flexibility and efficiency of a state-of-the-art central system.*

The Trane patent-pending bidirectional cascade heat pump system provides a higher-efficiency HVAC system option to building owners interested in geothermal-based heating and cooling with better humidity control, centralized maintenance, enhanced acoustics and superior flexibility.



Chillers

The Trane chiller product line includes centrifugal, helical-rotary and scroll compressor models, ranging in capacities from 20 to almost 4,000 tons. Trane chillers serve HVAC systems that deliver the right temperature, humidity and ventilation to the space, with low sound levels and industry-leading energy efficiency levels to help minimize operating costs and overall environmental impact. And, regardless of the chiller you choose, you'll benefit from the reliability that has made Trane chillers the industry standard for decades.

The entire CenTraVac chiller portfolio earned third-party verification through its product-specific Type III Environmental Product Declaration (EPD) Registration: your assurance of a sustainable choice.



Water-Cooled Chillers



Series R™
Helical-Rotary Chillers
Model: RTWD
80 to 250 tons, 50 and 60 Hz

Condenserless Chillers
Model: RTUD
80 to 250 tons, 60 Hz



Optimus™
Helical-Rotary Chillers
With optional variable-speed drive
Model: RTHD
150 to 430 tons, 60 Hz
125 to 430 tons, 50 Hz



Scan the code to see the video.



Cold Generator™
Scroll Chillers
Model: CGWQ
20 to 70 tons, 60 Hz



Cold Generator
Condenserless Scroll Chillers
Model: CCAQ
20 to 70 tons, 60 Hz



Cold Generator
Compact Scroll Chillers
Model: CICA
20 to 50 tons, 60 Hz
Model: CICB
28 tons, 60 Hz

Water-Cooled Centrifugal Chillers



CenTraVac™ Chillers
Model: CVHE
120 to 500 tons, 50 and 60 Hz
Model: CVHF
325 to 2,000 tons, 60 Hz
Model: CVHG
450 to 1,300 tons, 50 Hz



Scan the code to see the video.



Duplex™ CenTraVac Chillers
Model: CDHF
1,400 to 3,950 tons, 60 Hz
Model: CDHG
1,200 to 2,500 tons, 50 Hz



Series S™ CenTraVac Chillers
Industrial Oil-Free
Model: CVHS
180 to 390 tons, 60 Hz
180 to 340 tons, 50 Hz



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Series L™ CenTraVac Chillers
Low Lift, High Leaving Evap
Model: CVHL
400 to 1,800 tons, 50 and 60 Hz



Scan the code to see the video.



Sintesis™ chillers are part of the Trane Technologies EcoWise™ portfolio of products that are designed to lower their environmental impact with next-generation, low global-warming potential (GWP) refrigerants and high-efficiency operation.

Air-Cooled Chillers



Scroll Chillers

Model: CGAM
20 to 130 tons, 50 and 60 Hz



Series R™ Helical-Rotary Chillers

Model: RTAC
140 to 500 tons, 60 Hz
120 to 400 tons, 50 Hz



Sintesis™ Helical-Rotary Chillers

Variable-Speed Screw Compressor
Model: RTAF
115 to 500 tons, 50 and 60 Hz

Available with next-generation,
low-GWP refrigerant



Scan the
code to see
the video.



Stealth™ Helical-Rotary Chillers

Variable-Speed Screw Compressor
Model: RTAE
150 to 300 tons, 50 and 60 Hz



Scan the
code to see
the video.

myTest™

Trane also leads the industry with the most comprehensive chiller testing facilities. An AHRI Certified™ selection predicts the performance of your chiller based on laboratory testing. An AHRI verified test loop tests the actual performance of your chiller in conformance to the AHRI Standard. So, testing your chiller on an AHRI verified test loop before it leaves the factory ensures, through documentation, that your chiller’s predicted performance matches the AHRI Certified selection, while also substantiating the pre-installation quality of the chiller, helping ensure a trouble-free startup.*



Energy saving options

Trane chillers offer a wide range of options to reduce your energy consumption and lower your operating costs.

Visit Trane.com/commercial or contact your local Trane account manager to learn more.

Heat Recovery

Improve your system efficiency and lower your total cost of ownership by using heat that would normally be rejected to the atmosphere for space heating, preheating domestic hot water or some other purpose. Consider this option for any application requiring simultaneous heating and cooling or where heat can be stored for later use.

Ice Storage

Reduce electrical demand by making ice at night when utilities charge less for electricity. This ice then supplements — or even replaces — mechanical cooling during the day when utility rates are at their highest, resulting in utility cost savings.

Free Cooling

Imagine the energy and cost savings when you get cooling capacity from your chiller without running the compressor! When either the temperature of the water from the cooling tower (water-cooled chillers) or the ambient temperature (air-cooled chillers) is colder than the desired chilled water temperature for the building, free cooling can be used to satisfy the cooling load without operating the compressor.

*Visit Trane.com/myTest for more information.

Air Handling

Effectively conditioning and circulating air through a building is vital to the occupants' comfort and performance. Trane air handlers are designed to seamlessly integrate with our other system components to address critical indoor air quality issues of temperature, humidity, ventilation and air cleaning at low sound levels and minimal operating energy cost.

Air Handlers



Performance Climate Changer™

Indoor Air Handlers

Models: UCCA, CSAA, TCFS,
1,500 to 200,000 cfm



Scan the code to see the video.



Performance Climate Changer

Outdoor Air Handlers

Models: UCCA, CSAA, TCFS,
1,500 to 200,000 cfm



Scan the code to see the video.

Outdoor Air Units



Horizon™ Air-Source Heat Pump

Models: OAN, OAB, OAD, OAG, OAK, OAN
500 to 13,500 cfm
3 to 54 tons



Horizon Water-Source Heat Pump

Models: OAB, OAD, OAG, OAK, OAN
500 to 13,500 cfm
3 to 54 tons



Horizon Package Outdoor Air Unit

Models: OAB, OAD, OAG, OAK, OAN
500 to 13,500 cfm
3 to 54 tons

Make-Up Air



Indirect Gas-Fired Indoor
Make-Up Air Handler
Model: GSAA



Separated Combustion Indoor
Make-Up Air Handler
Model: GXAA



Direct Gas-Fired Indoor
Make-Up Air Handler
Model: DFIA



Direct-Fired Outdoor
Make-Up Air Handler
Model: DFOA



Packaged Air Handling
Model: AHOA



Indirect Gas-Fired Outdoor
Make-Up Air Handler
Model: GRAA

Fans



Direct Drive Fan Arrays
Model: SDDP
10,000 cfm and up

SureFit™ Coils



Heating and Cooling



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Success Story

Cheatham County Schools

An elementary school in Cheatham County, Tennessee, was devastated by more than 7 feet of floodwater. It took work crews 60 days to clean up the building. Afterward, and with school scheduled to begin in early August, the district called on Trane for a total replacement of their HVAC system.

The project was completed by late July—and classes began on time.



The Trane CDQ™ (Cool, Dry, Quiet) desiccant dehumidification system was selected as one of R&D Magazine's 44th Annual R&D 100 Award winners.

Ductless Comfort Systems

The complete portfolio of Trane® ductless systems has a broader range of designs and sizes to benefit a wider variety of single-zone and multi-zone applications—making more people comfortable and saving building owners more money than ever before. With an integrated energy efficiency rating of up to 38.2 IEER, with simultaneous cooling and heating efficiency rating of up to 34.1 SCHE. Trane ductless technology is a reliable, sensible choice because it has been thoroughly researched and is completely supported in installation and servicing by one of the most trusted names in the HVAC industry: Trane.



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Outdoor Units: Single Zone



R-Series
Models: 4TYK, 4TXK
 ½ to 3 tons



C-Series
Model: 4TUK
 1½ tons



C-Series
Model: 4TUK
 2 to 2½ tons



C-Series
Model: 4TUK
 3 to 4 tons

Outdoor Units: Multi-Zone



MZ-Series
Model: MTXM
 1½ to 3½ tons



Modular Heat Pump/Heat Recovery
Models: 4TVH, 4TVR
 6 to 44 tons

Water-Sourced Units



Mini Heat Pump
Model: 4TVH
 3 to 4½ tons



Modular Heat Pump/Heat Recovery
Model: 4TVP
 6 to 48 tons

Indoor Units: VRF and C-Series



Slim One-Way
Model: 4TVE
7,500 to 13,500 Btu/h



Mini Four-Way
Model: 4TVB
9,500 to 23,500 Btu/h



Four-Way
Model: 4TVC
9,000 to 54,000 Btu/h



Slim Duct
Model: 4TVL
7,500 to 54,000 Btu/h



Mid-Static Duct
Model: 4TVD
18,000 to 54,000 Btu/h



High-Static Duct
Model: 4TVA
36,000 to 108,000 Btu/h



High Wall
Model: 4TVW
7,500 to 27,000 Btu/h



Floor/Ceiling
Model: 4TVX
18,000 and 27,000 Btu/h



Convertible AHU
Model: 4TVM
24,000 and 63,000 Btu/h

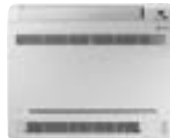
Indoor Units: R and MZ-Series



Cassette
Model: 4MXC
12,000 to 30,400 Btu/h



Concealed Ducted
Model: 4MXD
8,500 to 27,400 Btu/h



Indoor Console Ducted
Model: 4MXF
9,000 to 19,700 Btu/h



Floor/Ceiling
Model: 4MXX
8,500 to 27,400 Btu/h



High Wall Heat Pump
Model: 4MXW
9,000 to 34,000 Btu/h



Air Terminal Devices

Variable-Air-Volume Units

Trane® variable-air-volume (VAV) units are among the industry leaders in quality and reliability and are designed to meet the unique needs of your building. All units feature direct digital controls to ensure they seamlessly interface with other system components through the building management systems.



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VariTrane™ Single/Dual Duct

Models: VCCF, VCWF, VCEF, VDDF



VariTrane Parallel Fan-Powered

Models: VPCF, VPWF, VPEF, LPCF, LPEF

Series Fan-Powered

Models: VSCF, VSWF, VSEF, LSCF, LSWF, LSEF



VariTrane Slot Diffusers

Model: VLSD



VariTrac™ ChangeOver Bypass VAV

Models: VADA, VARA



Retrofit Round Out/Round In

Model: VRRF

225 to 4,000 cfm

Terminal and Heating Products

Designed to operate efficiently and be easy to install, Trane air terminal and heating products offer high-quality controls, flexible construction and lasting service with minimal upkeep.



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Fan-Coil Air Conditioners



UniTrane™ Fan Coil

Horizontal, Vertical and Low Vertical

Model: FCBB
200 to 1,200 cfm

Unit Ventilators



Classroom Unit Ventilator

Horizontal, Vertical and Energy Recovery

Models: HUV, VUV, ERSA
750 to 2,000 cfm

Blower Coil



Blower Coil Air Handler

Models: BCHD, BCVD
400 to 3,000 cfm

Active Chilled Beams



Two- and Four-Pipe Models

Three Ceiling Configurations
Models: CBCA, CBWA

Cabinet Heaters



Force-Flo™

Horizontal and Vertical

Model: FFBB
200 to 1,200 cfm

Unit Heaters, Wall-Fin and Convectors



Steam and Hot Water Unit Heaters

Models: UHS, UHP
8 to 720 MBh



Electric Unit Heaters

Models: UHEC, UHXA, UHRA
1½ to 50 kW



Indoor Gas Heating Products

Model: GTNE, GTPE, GHNE, GBNE, GBPE
30 to 400 MBh

Unit Heaters, Wall-Fin and Convectors



Electric Forced-Air Wall and Ceiling Heaters

Models: UHCA, UHAA, UHWA
1½ to 5 kW



Electric Wall-Fin (4-inch height)

Model: EWFB

Water-Source Heat Pumps

Trane® Axiom™ water-source heat pumps (WSHP) deliver high-performance heating and cooling with exceptional efficiency; up to 40 EER on select systems. And with all this performance and efficiency, advanced technology makes Trane Axiom easy to operate and maintain, resulting in optimal comfort and long-lasting durability.



Scan the code to see the video.



Console
Model: GEC
½ to 1½ tons



Water-to-Water
Model: EXW
5 to 20 tons



Vertical Stack
Model: GET
¾ to 3 tons



Variable-Speed
Model: VSHV
2 to 5 tons



High Efficiency
Model: EXHV
1½ to 6 tons



Model: GEHV
½ to 5 tons



Rooftop
Model: GER
3 to 25 tons



Midrange and Large
Model: GEHV
6 to 25 tons

Success Story

University of Central Missouri: Water-Source Heat Pump

In the spring of 2009, the University of Central Missouri (UCM) embarked on a \$36.1 million energy savings contract with Trane. The project included:

- Installation of 150 geothermal wells
- Replacement of the outdated, unsightly power plant and boiler system with a green, sustainable geothermal heat pump system
- Improvement of air-handling systems and acoustical qualities
- Laboratory air systems and controls
- Life safety measures

A campus wide building automation system to effectively manage energy use. An innovative feature of the Trane package includes “green screens” throughout the campus. These are used to educate the faculty, students and the community on the university’s sustainability initiatives—and learn what they can do to make a difference and get involved in efforts toward becoming a carbon-neutral campus.

Construction was scheduled to last through the spring of 2011, but the project was completed six months ahead of schedule. UCM now has a sustainable, high-performance campus and estimates it will see \$735,000 in annualized consumption savings, \$848,000 in operating and maintenance savings, and \$1.5 million in avoided annual capital improvements.

DX Packaged Units

Self-Contained Units

Regardless of whether you're building a new building or renovating an existing structure, Trane offers vertical self-contained systems to meet your specific needs. Each system is engineered to provide years of reliable, efficient and quiet operation.



Commercial Self-Contained Signature Series

Models: SCWF, SIWF,
SCRF, SIRF
20 to 110 tons



Commercial Self-Contained

Modular Series
Models: SCWG, SIWG,
SCRG, SIRG
20 to 35 tons



Vertical Self-Contained

Models: SCRJ, SCWJ
3 to 15 tons



Integral Self-Contained

Model: SCIJ
5 to 15 tons

Air-Cooled Condensers



Air-Cooled Condenser

Model: CAUJ
20 to 120 tons
Model: CTA
3 to 15 tons
Models: CCRC, CIRC
20 to 60 tons

Success Story

ARRIS Group

ARRIS Group — a global communications technology company specializing in the design and engineering of broadband networks — requires 99 percent or better uptime for their global data center. Trane provided a total system-integrated service solution that includes central monitoring of 69 alarm and event points that are mission-critical to delivering uptime. Trane field service technicians deliver a performance-based service agreement with custom defined performance metrics tailored to meet the specific needs of ARRIS. The HVAC system equipment includes 54 rooftop units, one air-cooled 225-ton chiller and Trane Tracer™ controls.

Packaged Rooftop Units

Packaged units provide a combination of premium components specifically designed to be easy to install and meet your building's specific needs. These unitary systems provide single or multi-zone heating, cooling and ventilation. Each system is designed to address today's comfort demands—superior indoor air quality, straightforward installation and minimized energy consumption.

Packaged Gas/Electric and Heating/Cooling



Impack™ Cooling

Convertible Airflow
Model: 4TCC3 (13 SEER)
Model: 4TCY4 (14 SEER)
 1½ to 5 tons



Precedent™ Cooling

Convertible Airflow
Models: THC, TSC
 3 to 10 tons



Scan the code to see the video.



Voyager™

Models: TCD, TED, YCD, YSH, YHH, YSD, YHD
 12½ to 50 tons



Foundation™

Models: EAC, GAC, GAD
 15 to 25 tons



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Impack Gas/Electric

Convertible Airflow
Model: 4YCC3 (13 SEER)
Model: 4YCY (14 SEER)
Model: 4YCZ6 (16 SEER)
 1½ to 5 tons



Precedent Gas/Electric

Convertible Airflow
Models: YSC/YHC
 3 to 10 tons



Voyager Horizontal

Models: YSH/YHH
 12½ to 25 tons



Voyager Commercial

Down flow, Horizontal or Mixed Airflow
Models: YC, TC, TE
 27½ to 50 tons

Packaged Heat Pumps



IntelliPak™ 1

Models: SAHL, SXHL, SEHL, SFHL, SLHL, SSSL, SXHK, SEHK, SFHK, SLHK, SSKH
 20 to 130 tons

Scan the code to see the video.



IntelliPak 2

Models: SXHJ, SEHJ, SFHJ, SLHJ, SSHJ
 90 to 162 tons



Voyager

Model: WSD (Downflow)
Model: WSH (Horizontal)
 12½ to 20 tons



Impack Heat Pump

Convertible Airflow
Model: 4WCC3 (13 SEER)
Model: 4WCY4 (14 SEER)
Model: 4WCZ6 (16 SEER)
 1½ to 5 tons



Precedent Heat Pump

Model: WSC
 3 to 10 tons

Split Systems

When reliable operation, easy service and installation flexibility are important, consider a Trane® split system. By accurately matching capacity to your specific performance needs, we can help you realize lower installed costs and energy savings throughout the life of your building.

1½ to 5 tons	2½ to 5 tons	6 to 25 tons	20 to 120 tons
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Light Unitary

Large Unitary

Cooling



Single Phase
Models: 2TTB3, 4TTB3, 4TTR3, 4TTB6, 4TTR6, 4TTR7



Three Phase
Models: 4TTA3, 2TTA3



Odyssey™
 Three Phase
Model: TTA



Model: RAUJ

Heat Pumps



Single Phase
Models: 2TWB3, 4TWB3, 4TWR3, 4TWB4, 4TTR5, 4TWB7



Three Phase
Model: 4TWA3



Odyssey
 Three Phase
Model: TWA

Air Handlers



Models: TEM3, GAM2, TAM4, GAM5, TAM7



Model: TWE



Gas Furnace/Indoor Coils
Models: TTD1, TUD1, TDD1-H, TUD1-H, TDD2, TDH1, TDH2



Models: 4CXC, 4TXA, 4TXC, 4TXF



Trane Energy Solutions and Building Services

Every building has the potential to be better with the right solutions. At Trane, our engineers and building specialists can provide the support and expertise to help you make your building — and your business — better through innovative technology and solutions.

Energy Management Systems & Services

A comprehensive set of energy management solutions that facilitate monitoring, analysis, alerts, reporting, and data visualization of building and energy system information.

Building Controls & Automation

Provide the technology platform for the next generation of data-driven, technology-enabled services that are creating high-performance buildings.

Energy Contracting

As an Energy Services Company (ESCO), Trane's Energy Contracting services can help you reallocate waste in current spending to a more productive portion of operations, address deferred maintenance and optimize current resources, or conduct strategic and life-cycle planning.

Renewable Energy & Power Solutions

Reduce costs while improving the reliability of your energy source.

Energy Procurement & Management Services

Get competitively sourced electricity and natural gas while managing your budget, and a suite of reporting services for best-in-class energy management.

Building Controls & Automation

Beyond the ability to control heating and cooling, sophisticated buildings require smarter technology that will carry into the future. From sensors and equipment controls to industry-leading building automation systems, Trane offers a complete controls portfolio that enables you to effectively monitor and coordinate building environments and systems with scalable, energy-efficient solutions. And because Trane controls are built on a platform that supports open standards, you can easily integrate equipment now and in the future.



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HVAC Equipment Controls

- Wide range of controllers to address most any application or brand of equipment
- Compatible with variety of building and system types
- Intuitive graphical user interface serves as a highly adaptable, standalone controls subsystem for air-handling units, boilers, cooling towers and chillers plants

Tracer™ Concierge™ System

- Provides building and system control to help you manage your building more efficiently, reduce costs and provide a better indoor environment for occupants
- The feature-rich functionality of building automation without added complexity
- Optimize building performance with a system based upon your needs

Tracer SC Building Automation System

- Sustainable systems that deliver measurable, repeatable, and superior performance at lower operating costs
- Streamline facility management
- Manage system performance from anywhere with simple, Web-based accessibility



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Tracer™ ES Enterprise Building Management

- Enterprise-wide control of multiple buildings and systems from any PC, tablet or Web-enabled device on your network
- Manage centralized scheduling and alarms
- Access your system for remote troubleshooting
- Supports long-term data storage to document and monitor performance
- Brings disparate systems together for the flexibility to make changes or upgrades

Trane Air-Fi™ Wireless Technology

- Wireless communication technology simplifies building controls projects by eliminating the wire
- Cost-effective, faster installation
- Reliable and stable signal throughout your building with a typical 200-foot indoor signal range and up to four times the number of potential paths
- Self-repairing mesh technology with redundant signal paths prevents communication loss and automatically reroutes disrupted signals
- Lifetime battery in typical operating conditions provides long-lasting performance
- Conforms to IEEE 802.15.4 standard, to seamlessly coexist with other wireless systems

Legacy Controls

- Tracer Summit™ Building Automation System
- Tracker™ Light Commercial Systems Controller
- Tracer Air Handler Controllers AH540 and AH541
- Tracer Variable-Air-Volume Controllers VV550 and VV551
- Tracer Zone Controllers ZN511 and ZN521
- Tracer Unitary Controllers ZN517
- Tracer Programmable Controllers MP580 and MP581
- Tracer Controllers MP501 and MP503

Upgrade Solutions

- Building controls upgrade programs such as Trane BAS R'newal™ can make your existing BAS more effective by leveraging equipment and systems you already have
- Take advantage of new technologies and capabilities while maximizing existing assets
- Comprehensive solutions designed to improve building performance and efficiency while making systems more cost-effective and reliable



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Energy Management Systems and Services

Trane Intelligent Services help you manage your facility for optimum energy efficiency, reliability and occupant satisfaction. Energy services available with Intelligent Services help you assess and track building performance, with ongoing support and consultation from experienced Trane building professionals who bring capabilities and deep industry knowledge in energy efficiency, building automation, HVAC equipment, mechanical systems, building operation and more. Trane uses innovative technology and tools to help you transform data into actionable insights and building intelligence, so you can take actions that optimize the performance of your building and achieve results that matter for your organization. You get a clear picture of building and system performance, for business outcomes you can see and validate — and sustain over time.



Building Performance

- Analyzes data and equipment behavior to see what's happening in your building
- Uncovers hidden information and opportunities for improvement
- Provides ongoing analysis and recommended actions for improvement from Trane building professionals



Energy Assessment

- Provides a baseline of building performance to help you see the potential for improvement
- Utilizes advanced tools and expertise of Trane professionals to help you visualize and measure building energy data
- Transforms data into meaningful information, so you can identify and dollarize impactful energy projects for sustained results



Energy Performance

- Monitors utilities and analyzes how your building systems are using energy in real time
- Aggregates all building energy data using powerful visualizations and robust analytics, for proactive insights
- Provides a centralized view for tracking and reporting building information and key performance indicators



Active Monitoring

- Provides 24/7 support and continuous monitoring of your building systems
- Proactively detects problems to keep your critical systems up and running
- Resolves issues quickly or initiates action to resolve the issue, with analysis of each alarm by Trane building professionals

Energy Contracting

Reduce costs, improve reliability or expand the capability of your existing infrastructure and building systems. With Trane Energy Contracting, Trane will boost the energy efficiency of your building, reinforcing positive ROI business results. We can help you reallocate waste in current spending to a more productive portion of operations, address deferred maintenance and optimize current resources, or conduct strategic and life-cycle planning. As an Energy Services Company (ESCO) accredited by National Association of Energy Services Companies and certified through Canadian Federal Buildings Initiative, the Trane portfolio of offerings provides a broad range of energy solutions. Our Energy Contracting services are cost-effective and, over time, can largely pay for themselves with minimal impact on cash flow or capital investment required.

Performance Guarantee Contracting

- Maintain optimum functionality while keeping in mind the changing needs of your building
- We access metrics beyond just energy consumption to design a comprehensive plan for peak effectiveness for your critical business needs
- Trane helps you build a long-term plan that will take growth and change into consideration
- Services include:
 - Equipment selections and services
 - Control systems
 - Building operations support
 - Measurement and verification
 - Training
 - Parts
 - Technical support



Scan the code to see the video.

Energy Savings Performance Contracting

- Saves money for your business through efficiency upgrades, minimizing or eliminating the need for capital expenditures and a fast ROI
- Utilizes a proven approach backed by deep industry experience spanning HVAC and engineering solutions, services, technology solutions, operator coaching and energy purchasing
- Meet your business needs while neutralizing negative budget impacts
- Local presence and international support resources from Trane provide the ability to continue to optimize, achieve and maintain progress toward your goals

Design and Build Turnkey Projects

- With industry-leading building systems knowledge and experience, Trane helps you gain insight into your business, issues and goals
- Trane partners with you to evaluate systems alternatives, develop an action plan and timeline
- Systems are specified to deliver long-term cost and performance benefits tailored to your business objectives, and with guaranteed first costs
- Add turnkey solutions to HVAC design and engineering; high-efficiency, low-emission equipment; controls and system integration; and implementation of demand-side management strategies for a comprehensive solution built for you

Asset Renewal

- An update or upgrade may be a better solution for improving or preserving your ability to deliver business results, especially when dealing with near-term constraints
- Discover and deliver improvements; add capabilities, capacity or repairs; and help with value-added shifts to your existing operations while planning for the long term
- Balance total cost of ownership with net present value as you define it
- Scalable solutions include overhauling current equipment, adding current generation controls or implementing a maintenance program to eliminate deferred maintenance

Existing Building Commissioning

- Bring your facility performance in line with current needs through retro-commissioning
- Keeping gains in building performance through ongoing commissioning
- Combination of patented building data analysis tools, connected solutions for continuous diagnostics, unparalleled HVAC and energy systems expertise and local resources to help you meet your goals

Renewable Energy & Power Solutions

You want an energy solution that integrates cost, reliability and social responsibility in the face of increasing pressure to examine energy sources and practices. Shifting government standards and regulations also play a role. These offerings can help you reduce costs while improving the reliability of your energy source. If you're looking to achieve energy independence, we can advise and assist you in transitioning your current grid system to an autonomous one. We can help you address regulations and achieve or exceed standards for energy conservation, with solutions ranging from turnkey renewable energy solutions to alternative energy generation.

- Cogeneration
- Compressed NG (fuel switch)
- Photovoltaic
- District Energy Plants
- Biomass
- Solar Thermal
- Biogas
- Wind Power





Energy Procurement & Management Services

Energy prices are volatile, and energy markets are complicated. If you're looking to reduce costs and improve business results without incurring operational risk or capital expenditures, Trane can help. Our energy supply expertise ensures you get competitively sourced electricity and natural gas while managing your budget. We also provide a suite of reporting services for best-in-class energy management. For over 20 years, we have helped a diverse range of clients reduce energy costs, applying our expertise in electricity and natural gas markets, securing the most competitive pricing and contract terms from suppliers, and delivering unsurpassed market intelligence and customer service.

Energy Sourcing

- Get the most favored contract terms available when you go to market for your electricity, with our team's technical analysis, insight and recommendations

Energy Price Risk Management

- We provide energy intelligence and a market view designed to reduce price volatility, meet budgets and protect your bottom line
- Our team delivers energy risk management services through a suite of publications, conference calls and webinars to keep you informed and help you make the best decisions

Global Energy Management

- Global expertise when your business spans multiple countries
- Trane provides energy procurement, budgeting and price forecasting, reporting, risk management and market intelligence services for global operations

24/7 Power Control Center

- Only one of its kind in the industry, to help you with asset management, electricity generation dispatch and peak-load management
- Optimize your power generation assets, energy supply contracts and improve operating efficiency with 24/7 market monitoring, wholesale power access, electricity asset scheduling and dispatch and peak-load management

Energy Data Management

- Our energy professionals and custom data systems validate that your energy bills are correct, saving you time and money
- Better understand your energy cost and use, set budgets and track variances to better manage your energy supply chain
- Easily access all of your energy cost and use, contracts, utility tariffs, budgets and invoices in one simple password-protected environment with our dataPoint™ software platform

Utility Base Line Review

- Verify that your buildings are always on the best utility rates, providing savings you can bank on
- Continuously monitor the utility rates and tariffs for all of your facilities
- Make sure that if a utility changes rates, you continue to get the best rate

Knowledge Center

- Get in-depth, client-specific solutions to your energy challenges
- Cutting-edge technology and knowledge-driven experience helps you develop an informed energy strategy that will produce results and returns on your investment year after year

Trane Building Services

When it comes to managing energy and operational costs, businesses and organizations have never been more challenged than they are today. Because the cost of energy is likely to continue to rise, even small improvements in efficiency can add up to significant budgetary savings over time.

That's why Trane Building Services provides a wide range of offerings that enable you to enjoy the highest levels of performance from the systems in your facility. Whether you're installing new equipment, maintaining an existing system or completely upgrading your infrastructure, Trane Building Services can provide exactly the expertise you need.

Our engineers and technical specialists can provide the support to help you achieve the most cost-effective performance from your system—from its first day of operation through the day it needs replacement.

As a global company and industry leader, Trane brings an abundance of collective knowledge to your building. More than 750 Trane employees are LEED®-certified professionals and 145 are AEE-certified energy managers. Top industry engineers, technicians, and support staff help you optimize the operation of your indoor climate control systems for as long as you own your building—that's the real advantage to working with Trane.

Even the best designed and operated systems require ongoing professional monitoring and maintenance to sustain performance. A long-term relationship with Trane ensures your original investment continually delivers a solid return.

Elite Start Services

The Trane Elite Start™ suite of services ensures that your new equipment is properly installed while setting the foundation for efficiency and performance far into its life cycle. These services include:

New Product Start-Up Services

After your new equipment is installed, but before it is commissioned or becomes operational, a factory authorized Trane HVAC professional will work on-site to optimize the setup of your equipment.

Extended Factory Warranties

Trane provides a variety of extended warranties to allow you another opportunity to manage the ongoing costs of your operation.

Operate and Maintain Services

Your building should work as hard at your business as you do. We provide comprehensive services for maintaining and operating facilities, improving reliability, and monitoring critical building functions such as temperature, air quality, electricity, lighting and plumbing. These services include:

National Multi-Site Services

Delivers standardized and consistent services to our multi-site business partners.

Facility Management Services

Provides single-source solution to cover the entire life cycle of your facility.

Repair Services

Our highly trained technicians ensure your repairs are done promptly and correctly the first time.

Chemical Laboratory

Routine analysis of the fluids in your HVAC equipment is essential to the proper maintenance and operation of the entire system. The Trane lab offers analysis services on compressor oils, absorption solutions and refrigerants.

Service Agreements

Reduce operating costs and extend the life of your equipment with planned maintenance.

Upgrade and Improve Services

Keeping your equipment running at peak performance levels ensures you get the most from your investment. With that in mind, Trane offers a variety of upgrade products designed to sustain and even increase the efficiency of your system. With Trane® parts and upgrade products, you get the confidence of a nationwide parts organization and the peace of mind only a local support team can bring.



Service Products



EarthWise™ Purge
for R-11, R-123, and R-113 Chillers



Tracer AdaptiView™
Retrofit Controls for Centrifugal and Water-Cooled Rotary Chillers



R'newal™ Service Program, Commercial Self-Contained Units, IntelliPak™
Refresh, Centrifugal Chillers, Series R™ Chillers, Adaptive Frequency™ Drives



Adaptive Frequency Drive
Air- and Fluid-Cooled for Low Drive and Medium Voltage Direct-Drive Centrifugal Chillers



Replacement/Upgrade Starters for Centrifugal Chillers



Remanufactured Motors for Centrifugal Chillers



Scan the code to see the video.

Parts and Supplies



ReSpecT™
Remanufactured Compressor



Refrigerant Monitor
Model: RMWE



Refrigerant Monitor
Model: RMWG



Self-Contained Breathing Apparatus

Trane Rental Services

A special event, natural disaster, planned outage ... there are a number of reasons you might need temporary cooling, heating or power. With more than 140 sales and service outlets across North America and 24-hour availability, Trane can deliver and install temporary equipment to get your business back online fast.



Scan the code to see the video.

Rental Services Equipment Fleet

Portable Units



Portable Units
1 to 5 tons

Compressed Air Units



Compressed Air Units
800 to 1,500 cfm

Chillers



Air-Cooled Chillers (460 volt)
10 to 500 tons



Water-Cooled Chillers (460 volt)
250 to 1,000 tons

Packaged Air Conditioning Units



Voyager™ Units (460 volt) with Electric Heat
25, 35 and 50 tons DX
35 and 50 tons High Static
Vertical Tent Units with Heat
10, 20 and 30 tons

Air-Handling Units



Air-Handling Units (460 volt)
Cold and Hot Water Coils
5,000 to 25,000 cfm

Cooling Towers



Cooling Towers
Induced Open
250 to 750 tons

Diesel Generators



Electrical Generators
36 to 1,500 kW

Miscellaneous Components



Electrical Cable
Transformers Trailers
Pumps and Hose
Air Compressors
Dryers

Heaters



Electric Heaters
20 to 150 kW
Indirect-Fired
500,000 Btu/h



Desiccant Dehumidifiers
5,000 cfm

Success Story

Saks Fifth Avenue

Offering the finest fashion designer collections, each year Saks Fifth Avenue takes part in New York City's Fashion Week. When one of the retailer's chillers went down less than a month before Fashion Week, Saks knew that their two remaining chillers wouldn't be able to handle the load with the August heat and humidity. It was critical to get the failed chiller back up and running as efficiently and as quickly as possible.

Trane proposed installing a rental chiller to keep the store's indoor climate comfortable, while servicing the failed chiller motor, which could take several months.

The Trane Rental Services team overcame the challenges of weather, timing, a historical building and tight city quarters to provide a turnkey chiller solution for Saks Fifth Avenue. Their quick action and ingenious rigging design allowed a temporary rental chiller to be installed on the ledge of the 8th floor, saving upcoming high-end fashion events at the retailer's first and most prestigious location. Trane also coordinated the motor change-out in the failed chiller, allowing Saks to return to normal operations without having to replace the entire chiller. "Trane was very responsive and professional," said Curt Walton, Saks Fifth Avenue director of facilities. "Maneuvering an 800 horsepower motor through the store and installing a temporary chiller without disruption to sales or efficiency ... logistically, it wasn't an easy job. Working together, we completed the project on time and on budget."

Support and Training

Trane understands that keeping up with the latest technologies is challenging work. That's why a software license gives you unlimited access to our Customer Direct Service (C.D.S.™) support team. Whether you need information or training on software, methodologies, application education or the latest industry trends and compliance requirements, our unrivaled C.D.S. support team is here to answer your questions. Our training sessions are designed for engineers, architects and HVAC design professionals to help you get the most out of your Trane software application.



Design and Analysis Software

For nearly 40 years, Trane has been providing analysis software to promote energy-efficient, environmentally responsible practices to sustain high-performance buildings for life. This philosophy has only strengthened with today's focus on the environment.

Trane® HVAC system analysis software tools are among the most powerful in the business. So, whether you are conducting a comprehensive load analysis, profiling system performance or determining the optimal HVAC components or configurations for a given project, we have a software package that will provide you with a solution for today's performance and design demands.

Analysis Tools

Whether you're designing for energy optimization, LEED® certification or ASHRAE compliance, our software utilizes the latest methodologies to provide the most comprehensive analysis tools available.



TRACE™ 700 is a complete load, system, energy and economic analysis program that compares building alternatives and optimization strategies.



System Analyzer™ is a preliminary analysis tool to help you compare energy and economic performance of prospective system designs.



Trane Acoustics Program (TAP™) makes it easy to accurately predict HVAC system sound levels or quickly compare sound characteristics of alternatives.



TRACE™ 700 Chiller Plant Analyzer software allows easy energy and economic comparisons of virtually any chiller plant configuration.



Trane Official Product Selection System (TOPSS™) makes it easy for you to select the right product for your project. CAD and BIM objects are available to help you seamlessly incorporate into your everyday workflow.



Scan the code to see the video.

Design Tools

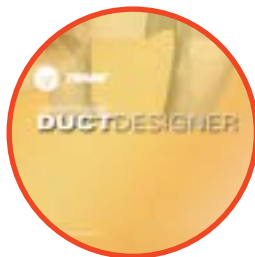
All of the options and modeling capabilities you expect in comprehensive design tools.



TRACE™ 700 Load Design is a comprehensive load analysis tool that uses the TRACE calculation engine, options and modeling capabilities combined with a whole new level of usability to make load design easy.



TRACE™ 700 Load Express is a limited version of Load Design that lets new designers and experienced users alike perform accurate heating and cooling load calculations and airflow capacities in minutes.



VariTrane™ Duct Designer consists of three applications to streamline duct design and improve calculation precision.



Pipe Designer streamlines the pipe design process. The program generates a complete bill of materials and provide detailed reports for analysis.



myPLV™ Chiller Performance Evaluation Tool predicts future chiller performance based on your chiller's installed location, building purpose and chiller plant design.

Learn more at trane.com



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 or tranetechnologies.com.

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