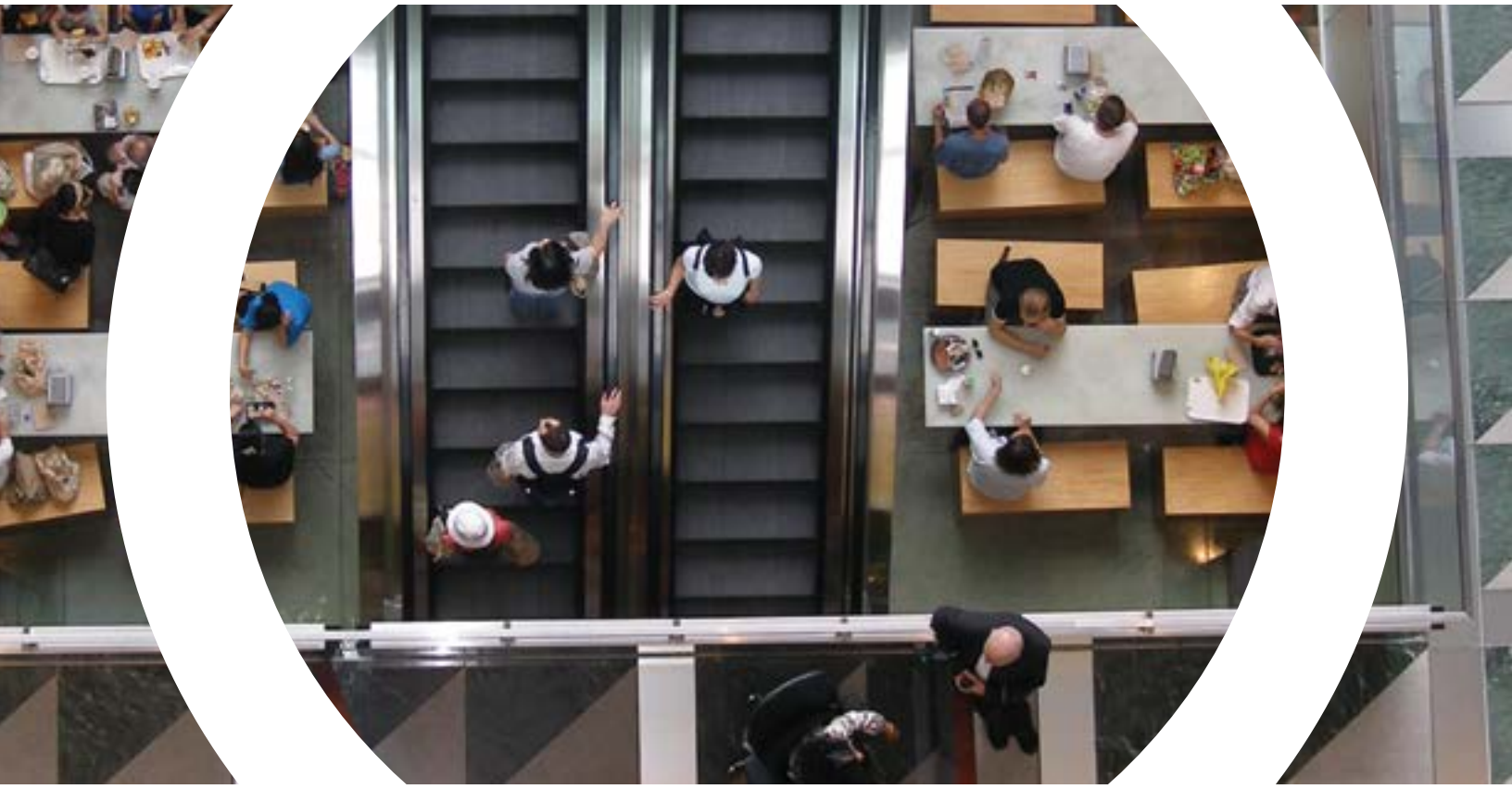
Trane Solutions for Retail Environments



Right for retail.

In a retail setting, the reliability and consistency of HVAC equipment has a direct impact on sales. A room that is too hot or too cold, too humid or too dry can generate customer complaints. Worse, it might drive customers away. Trane has over 100 years of experience in keeping people comfortable in restaurants, grocery stores, theaters, and other retail environments. We understand the correlation between indoor environment and bottom-line profitability. For retail facilities large and small, for new construction or replacements or retrofits, Trane is the single HVAC supplier to meet all your needs. With Trane, you not only get equipment with excellent performance and reliability, you also get a single point of contact, a rapid-response stocking program, and a nationwide sales and support team. Always available, always responsive, our business supports your business.

Helping to Create a Better Environment

With today's tight margins and high energy prices, operating costs have a significant impact on the profitability of the business. Selecting, operating and maintaining HVAC systems correctly and eliminating energy inefficiencies are very important considerations for retailers.

We are helping retail and restaurant customers to:

- Optimize indoor environments to drive sales
- Maximize energy efficiency and reduce operating and capital expenditures
- Minimize employee distractions with temperature controls, allowing them to focus on the customer

Efficiency

In retail environments, energy costs significantly impact the bottom line. Retail companies spend nearly $20 billion on energy each year.1 Therefore, smart HVAC choices add up to huge savings. Trane takes a comprehensive approach to energy management. With some of the highest energy efficiency ratings in the industry, Trane rooftop units can not only help reduce your operating costs but in many cases are eligible for energy rebates, which can help offset the up-front costs of new equipment. Bringing it all together, Trane controls and maintenance plans optimize systems for peak performance. Finally, Trane's industry leading sales and service team helps clients match the right equipment with the right specifications and the right installation plan.

Trane eFlex™ Technology

Trane rooftop units with eFlex™ variable speed compressors and fans precisely match output to the cooling demands of the space. They operate at high speed when demand is high and modulate to slower speeds when demand is low. When compared to similarly sized units with similar full load ratings at constant volume, eFlex technology-enabled products deliver 10%-25% greater part load efficiencies (IEER).

Trane light commercial rooftop units, with the support of Tracer™ control systems, consistently provide an efficient, comfortable and quiet environment for your customers and optimal humidity for moisture-sensitive products and property.

[1]Source: ENERGY STAR

High performance. Low installed cost.

Trane Precedent™ and Voyager™ light-commercial packaged roof top units combine maximum efficiency with minimal service requirements. The retail sites that choose these units often enjoy significant savings on energy and maintenance. Users do not sacrifice operational quality for this reduction in overhead; with Trane engineering, Precedent and Voyager units offer excellent performance and reliability.

Engineered for Efficiency

Trane rooftops offer multiple efficiency levels and airflow options that provide unmatched full load (for utility rebates) and part load (for lowest operating costs throughout the year) solutions to meet any application need. Additionally, efficiency can be improved and sustained by utilizing Trane controls, installation, maintenance, and service level agreements.

A Perfect Fit

Trane compact rooftop units fit into the same roof curb as current models, reducing installation time and costs. Some models are as much as 46% lighter than comparable units. This reduces the stress on the roof and prevents long-term damage to the building.

Custom tailored to meet your needs, preconfigured Precedent and Voyager units come with your choice of factory-installed options to eliminate expensive and time-consuming accessory field installations.

Sophisticated engineering. Easy maintenance.

A **MERV 13 Filter**

High efficiency filtration delivers improved indoor air quality—a key qualifying component for LEED EQ credit 5.

B **Multiple Airflow Solutions**

Whether it's Constant Volume, Multi Speed, Single Zone VAV, or True/Multi Space VAV, Trane has a solution that matches the application requirements. Each delivers a different value around efficiency or comfort or both.

C **Phase Monitor**

Protects unit from phase reversal, loss of phase and voltage imbalance.

D **Three Stages of Cooling***

Enhanced comfort through matching cooling load, savings. Allows for increased part load efficiency.

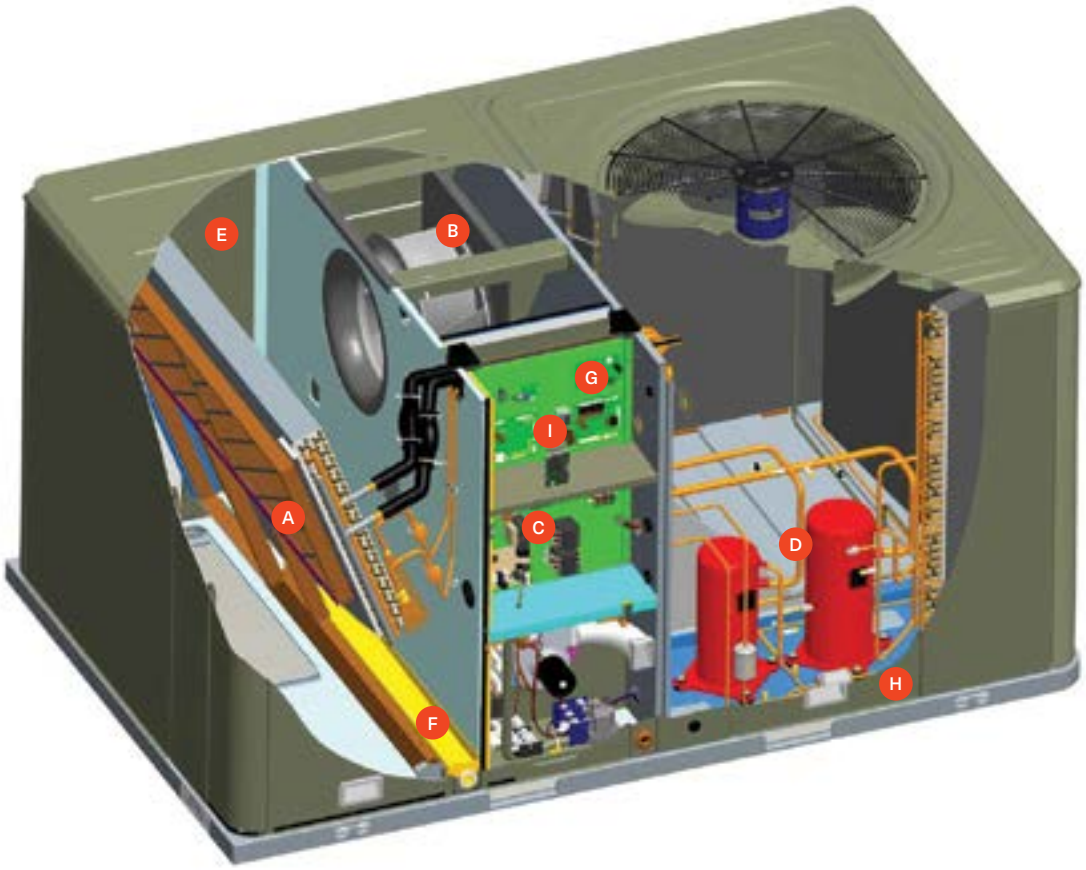
E **Foil-Faced Insulation**

Easy-to-clean insulation wraps and seals edges, reducing the chance of insulation fibers entering the airstream.

F **Drain Pan**

The non-corrosive, double sloped, reversible condensate drain pan reduces microbial growth. It is easy to install and clean.

Please contact your local Trane account manager for more information on standard and optional features.



G **Color-Coded, Numbered Wiring**

Faster identification of wires saves time and money when diagnosing and servicing the unit.

H **Hinged Access Doors**

Hinged doors permit easy entry to the unit's service access areas and reduce the possibility of roof damage.

I **ReliaTel™/Human Interface**

Controls onboard diagnostics; expedites startup and trouble shooting.

Test Mode Operation

Identifies potential problems and reduces overall service cost.

Hot Gas Reheat**

Optional hot gas reheat provides humidity control and indoor air comfort. This system utilizes a direct humidity control from the space to enable the hot gas reheat coil down-stream of the evaporator coil.

Trane Human Interface Panel**

The factory-installed human interface panel is an easy-to-read color touch screen display that shows both real time and trending information about system operations. This enables more efficient commissioning of Precedent™ and Voyager™ units and allows technicians to easily configure, monitor, and adjust system set points for more precise, efficient operations.

*Standard on all dual-compressor, high efficiency units
**Optional

The right fit, the right performance.

Trane Odyssey™ light commercial split systems stand apart from other manufacturers in quality, reliability, and total value. We stress test our systems at the factory to ensure reliable operation. They deliver full rated capacity at designed conditions. For easy servicing, Odyssey units have standardized cabinets and components with numbered, color-coded wiring, and the indoor air handlers fit through standard doorways and freight elevators.

Flexible Applications

Trane offers single, dual and manifolded compressor options, each with its own benefits:

Single compressor outdoor units feature a single refrigeration circuitry, lowering job installation costs by requiring only one set of refrigerant lines. Odyssey units offer single refrigerant circuit/capacity unloading models. The unloading units feature dual manifolded scroll compressors with two stages of capacity modulation and a single refrigeration circuit.

Dual compressor/dual circuit models give true stand-by protection—if one compressor fails, the second will start up. Since the refrigerant circuits operate independently, a single compressor can be serviced without shutting down the unit.

Dual compressor models save energy. During lowload conditions, a unit will conserve power by operating only one compressor. A factory installed variable frequency drive (VFD) is available on select air handlers. At maximum catalog design conditions, these 2-speed and single-zone VAV (SZVAV) solutions, combined with condensing units that have multiple compressors, provide increased part load performance (IEER). Some states have adopted codes that require this type of performance.

Trane Axiom™ Water-Source Heat Pumps

No other company maintains such a broad lineup of water-source heat pump systems. The Trane Axiom™ Variable Speed Water-Source Heat Pumps portfolio has a wide variety of configurations and designs to ensure compatibility and performance.

Vertical, horizontal, rooftop and console installation are supported, as well as buildings with either three-phase or single-phase electrical service.

The water-source heat pump systems offer a multitude of benefits. From exceptional efficiency to the advantage of integrated factory programmed controls, or the full-load and part-load improvements from the two stage compressor, improved comfort can be achieved for any building.

Axiom™ water-source heat pumps with eFlex™ technology offer superb control, comfort and cost-saving operation. In fact, with the ability to reach up to 40 EER, customers can find energy savings of up to 60 percent when compared to conventional water-source heat pump systems.

The Tracer™ UC400 control option takes advantage of pre-programmed, Trane-developed algorithms that maximize the performance of Trane eFlex™ variable speed compressors and fans. This allows for customization of cycling modes, airflow parameters and more.

Most importantly, eFlex technology improves occupant comfort and offers quiet operation. With reduced temperature swings and minimal on/off cycling, these systems are often ideal for educational institutions, businesses and government entities.

Improved occupant comfort

The Trane Horizon™ series of Outdoor Air Units is a complete line of supply air dehumidification products designed specifically for the year-round treatment of outdoor air. Even when operating at full capacity and consuming high amounts of energy, many traditional packaged rooftop HVAC systems do not have the latent capacity to effectively manage high humidity levels. This can cause uncomfortable conditions for building occupants. Adding a Trane dedicated outdoor air system not only improves indoor air quality, it also reduces HVAC operating costs. By cooling and filtering outdoor air, then directing the optimal amount of it into a building, a Trane dedicated outdoor air system will decrease indoor humidity, reduce the load on HVAC systems, and help maintain compliance with ASHRAE 62.1 ventilation standards. This results in improved occupant comfort and lower utility bills.

Dehumidification by Design:
High Performance Humidity Control

Air conditioning units are designed to cool air; their dehumidification abilities aren't optimized for maximum effectiveness and efficiency. A Trane dedicated outdoor air system utilizes components specifically designed to optimize the dehumidification process.

Six-Row Evaporator Coil

This 12-fins-per-inch evaporator coil is precisely engineered to manage the dehumidification process. When activated, it maintains a temperature of 38° F—an optimal temperature for quickly removing moisture from air while preventing coil icing.

Six-Row Evaporator Coil

Hot-Gas Reheat Coil

After dehumidifying, outdoor air can be uncomfortably cold. The hot-gas reheat coil raises its temperature to a more-comfortable, but still cool, temperature. The cool, dehumidified air is ducted to the building's interior or to terminal devices.

The system warms the hot-gas reheat coil with heat energy captured from the operation of the compressor that chills the evaporator coil—an effective energy-conserving strategy.

To protect interference with the chilling function of the evaporator coil, and to avoid re-evaporating the condensed water back into the air, the hot gas reheat coil is located a minimum of 6 inches away from the chilled evaporator coil. Strategic distancing of the hot gas reheat coil from the evaporator coil makes the overall dehumidification process more efficient.

Hot-Gas Reheat Coil

On Your Desktop. On the Go.
Everything You Need to Know.

The Trane Mobile TOPSSTM app and the Trane 360™ desktop app provide in-depth information on Trane products. Use this application suite to check inventory, identify parts, select, price, and order Trane products.

Controls & energy services.

Retail applications place unique demands on HVAC equipment. These environments can have ever-changing needs, complicated schedules, and a wide range of temperature requests. The environment must be comfortable for both the customers and the staff, from the floor to the stock room; from the table to the kitchen; and from the theater to the box office. Trane offers a wide range of control options to help retailers meet these demands conveniently and efficiently.

Trane Tracer™ Concierge™

The Trane Tracer™ Concierge™ system provides an easy and affordable way for store owners to gain control of lighting and HVAC systems. The Concierge system goes beyond managing individual rooms, running HVAC and lighting simply and smartly from one interface. The result is improved comfort and performance with reduced operating costs. As a bundled system of proven Trane components powered by the Tracer controls platform, the Concierge system provides the feature-rich functionality of building automation, without added complexity. An intuitive, local user interface for store managers simplifies daily operation and saves time making changes to the system.

Trane Tracer™ SC

The Trane Tracer™ SC building automation system is a complete building control solution that delivers the reliability you expect from Trane. The Tracer SC system coordinates the equipment from your building's HVAC and other systems. It offers control for facility managers and maintenance staff with a web-enabled user interface—so you get easy and convenient access to your system from virtually anywhere.

Trane Tracer™ ES

The powerful Tracer™ ES building management solution gives you an enterprise-wide view into all your building control systems—whether you have two locations or hundreds. Manage and respond to alarms, change setpoints and modify schedules with just a few clicks from a single access point—an efficient solution that helps ensure the safety and comfort of building occupants. The Tracer ES system is also easily customized to meet your specific facility management needs, and the wealth of information it provides can be tracked, stored and analyzed over years, to ensure building performance and efficiency.

Trane Tracer™ BAS Operator Suite

Compatible with the Trane Tracer™ SC system, this mobile app allows Facility Managers to monitor and control a facility from your mobile device. Check the HVAC system; set point changes; manage alarms; and respond to hot/cold calls. The Trane Tracer BAS Operator Suite puts your building at your fingertips.

Trane Air-Fi™ Wireless Systems

Trane Air-Fi™ wireless technology eliminates the need for wired components. No wired components means no-hassle installation; you can install Air-Fi wireless systems without disrupting your business. Air-Fi wireless systems provide secure, reliable operation, and include a maintenance-free lifetime battery.* The technology leverages open standard communication, which allows you to easily implement changes to meet future needs.

Trane Intelligent Services

Intelligent Services is a robust energy management systems and services portfolio that transforms your building data into intelligence and develops that intelligence into actionable insights. It helps you make informed, data-driven decisions to optimize building performance and improve business outcomes. With a range of options that are scalable to meet your specific needs, and with support and expertise from Trane building professionals each step of the way, you will reach your building's potential in energy efficiency, operational reliability, and occupant comfort.

Trane Intelligent Services are among the many solutions in the Trane energy solutions and building services portfolio, a suite of services and offerings that provide expertise you can trust and results you can measure. Trane energy solutions and building services represents:

Energy Management System & 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 Trane 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. We can help you address regulations, and achieve and exceed standards for energy conservation.

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.

*based on typical indoor operating conditions

Building Performance

Analyzes data to see what's happening in your building, providing proactive, data-driven insights and solutions to keep your building running optimally.

Energy Performance

Uncovers energy waste in every corner of your building and aggregates energy data using powerful visualizations and analytics, to bring clarity and hidden savings opportunities.

Energy Assessment

Identifies how your building uses energy and transforms that data into meaningful, clear information, to help you identify and monetize impactful energy projects for sustained results.

Active Monitoring

Provides 24/7 support and continuous monitoring, to proactively detect issues, quickly resolve problems or initiate action, and keep critical building systems up and running.

TRANE

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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