Trane®
Performance Climate Changer™
Air Handlers
An air handler for every need.
The portfolio of Trane® Performance Climate Changer™ air handlers is the most comprehensive in the industry, offering features and options to meet virtually any specification. From a model with essential features to simply, reliably and efficiently deliver clean, comfortable air to the industry’s most energy-efficient, flexible air handler with predictable performance, Trane offers unique benefits and reliability for unbeatable value and performance.

Trane air handlers are an important component of well-designed HVAC systems, offering increased energy efficiency and reduced operating costs, while quietly improving indoor air quality. Designed for flexible, simplified, lower-cost installation, Trane air handlers offer numerous options and features that add life to buildings and improve the lives of people within them.

- **Exceptional performance and industry-leading energy efficiency.** Superior design and state-of-the-art technologies mean you don’t have to compromise: Trane can help lower your utility bills and improve air quality, too.

- **Flexibility.** Design and analysis tools and a wide variety of configurations and component options give you the flexibility to tailor your Performance Climate Changer air handler to meet energy, noise and budget requirements. A Trane air handler also can be fully integrated into a building management system.

- **Equipment that’s easy to live with.** With robust, quality construction, Performance Climate Changer air handlers are designed for ease of installation and maintenance — and the reliability you have come to trust from Trane.
The Trane family of Performance Climate Changer air handlers offers indoor and outdoor models in more configurations than ever before to give you the features you need and the options you want to meet your exact specifications, your budget and your timeline.

- Technological advantages and superior construction methods for higher energy efficiency, lower installation costs, class-leading low air leakage rates, superior thermal performance and years of dependable operation.

- A wide array of casing, fan, coil, filter, control, damper and airflow measurement options for added value and performance.

- Exclusive options for energy recovery and superior indoor air quality, including air cleaning, dehumidification and acoustic solutions.

- Complete flexibility in design and dimensions, with third-party certification for predictable performance you can trust.

- Available shorter casing lengths to meet specific installation challenges.

- Aluminum casing options to serve projects where lighter weight is required.
Energy efficiency and air quality — without compromise.

An HVAC system’s energy consumption can be significantly reduced, and indoor air quality can be greatly increased, when it has the right air handler. Trane can deliver the features and components you need to lower utility bills and energy usage while improving occupant comfort.

Superior casing construction
Exclusive manufacturing techniques help produce exceptionally low rates of air leakage and panel deflection, resulting in up to 30 percent lower energy consumption. Double-wall casing panels can be up to 4 inches thick and injected with high-performance foam insulation. Models are available that meet ASHRAE Standard 111 Class 6 for air leakage rates, with an option that exceeds the more stringent Class 3 level, maximizing energy savings and minimizing operating costs. The casing design can come with a complete no-through-metal thermal break, minimizing thermal transmission and condensation.

Advanced energy-recovery options
All Trane® air handlers have basic features to encourage energy conservation, allowing the HVAC system to surpass minimum ASHRAE Standard 90.1 requirements. Factory-packaged energy recovery solutions are available to address even greater energy consumption requirements and costs.

AHRI 1060-certified energy wheels
recover energy from the exhaust air stream, transferring it to the air being distributed throughout a building and reducing the workload on chillers and boilers, lowering energy use and utility bills. Energy wheels are available in both indoor and outdoor arrangements, and can be applied in either 100 percent outdoor air or mixed-air designs. Trane energy recovery software can model your specifications to show the benefit of payback analysis.

The patented Trane Dual Exhaust Energy Recovery (DEER) system captures energy that would otherwise be lost by directing exhaust air from a building and its restrooms into a specifically designed energy wheel arrangement that recovers energy from multiple air streams while minimizing recirculation of toilet exhaust — in a single unit with a more efficient fan and motor arrangement.

Air-to-air plate heat exchangers
are a great solution to recover sensible energy (heat only) from an exhaust air stream, with little or no cross-contamination. These exchangers may also be used for free reheat in dehumidification applications, including dedicated outdoor air systems. Where exhaust air is not available, exchangers can be used in series to heat the dehumidified air.
Trane dedicated outdoor air systems
Performance Climate Changer™ air handlers are designed for straightforward integration with Trane dedicated outdoor air systems to meet your needs for conditioned 100 percent outdoor air — improving indoor air quality, controlling relative humidity and reducing the load on other HVAC equipment in a building.

Trane Catalytic Air Cleaning System (TCACS)
Numerous filtration options are available with Performance Climate Changer air handlers, but TCACS offers an additional level of protection to help manage the biological and chemical contaminants that can be recirculated through a building. Hospitals, schools and airports can particularly benefit from this exclusive Trane solution that can help reduce the chances of disease transmission.

TCACS combines three technologies — MERV 13 high-efficiency filtration, UV-C lights and photo-catalytic oxidation (PCO) — to help control a broad range of airborne contaminants and provide comprehensive air cleaning. A titanium dioxide (TiO2) mesh catalyst is irradiated by UV-C lights, which creates hydroxyl radicals that reduce organic compounds (viruses, mold, bacteria, VOCs) passing through the air handler.

Trane Cool Dry Quiet (CDQ™) desiccant dehumidification wheels
For applications where humidity levels are critical — such as surgical suites, museums and printing plants — a CDQ system can help control and manage building humidity. With CDQ technology, critical dehumidification levels can be improved 20 to 300 percent by delivering dew-point temperatures 5°F to 10°F lower than traditional cooling coil systems. CDQ technology breaks the dew-point barrier, supplying a dew-point that is lower than the refrigerant or chilled water temperature without having to add additional cooling devices to achieve the same results. Equally important, a CDQ system can reduce energy consumption by up to 60 percent compared to a cooling coil with reheat. CDQ technology is just one of the humidity management options available from Trane.

Stacked Direct-Drive Plenum (SDDP™) fan arrays offer a number of advantages over traditional fan types. Data centers and hospitals will appreciate the capability to reach 100 percent redundancy, often without the need to oversize the electrical system. Building owners will see improved serviceability with smaller fans and up to 10 percent increased efficiency. Another plus is the reduced footprint — better than 30 percent when compared to a traditional housed fan system.

Quiet comfort
Acceptable space sound levels enhance occupant comfort and productivity. Trane® Performance Climate Changer™ air handlers use AHRI 260-certified unit sound data to help ensure that you get the performance you expect. When sound levels are more stringent, such as in concert halls and classrooms, Trane air handlers have options available that allow them to be used in many low NC applications.

- **Direct-drive plenum (DDP) fans** are typically quieter than belt-driven options. DDP fans are available with multiple fan blade types, blade counts and wheel diameters, allowing fan acoustical properties to be optimized for the quietest possible operation.

- **Discharge plenums and tuning modules** are specifically engineered to reduce air turbulence and improve sound attenuation.

- **Silencers** are available on the fan inlet and discharge to reduce noise more efficiently than duct-mounted silencers.

- **Acoustical prediction software** models various configurations to quickly and accurately predict and compare system sound levels.

- **Perforated fiberglass** can be specified as an additional insulation layer for casing panels to deliver superior noise control.

Controls solutions
Performance Climate Changer air handlers offer one of the most comprehensive factory-packaged controls systems available, from end devices to total system integration with industry-standard open protocols.

Controls are engineered, mounted, wired and tested before leaving the factory. This provides consistency and reliability, as well as reduced installation time and expense, plus single-source responsibility without compromising casing integrity.

- **BACnet®-listed controls** reduce installation time.

- **End devices can be wired to terminal strips or a factory-mounted controller**, minimizing installation and risk.

- **The Trane EarthWise™ system** incorporates the benefits of factory-installed controls and links the air handler to the Tracer™ SC system controls building management system.

- **Pre-packaged solutions (PPS)** is a library of pre-designed subsystem solutions that leverage core Trane strengths and standardize the system solutions.

Performance Climate Changer air handlers are designed to meet the Trane EarthWise design philosophy of incorporating the benefits of factory-installed controls and Tracer SC system controls.
Minimal maintenance with maximum benefits
You want minimal maintenance. Trane delivers with multiple features to reduce the amount of time needed to keep your air handler working reliably and efficiently.

- Multiple access panels and smooth interior surfaces make maintenance and cleaning quicker and easier.

- Available no-through-metal construction and double-wall casing panels with up to 4 inches of high-performance, injected foam insulation help mitigate exterior condensation and moisture-related problems under normal operating conditions.

- Superior casing construction with foam-injected, double-walled panels safeguards against extreme temperatures and inclement weather conditions so your system’s performance is well protected.

- Trane SDDP fan arrays can give full redundancy without significantly oversizing the fan motor. Since multiple fans are used, the motors are smaller, lighter and easier to remove than a larger motor used in a single-fan design.

- DDP fans have no belts requiring tension adjustment or changing, for lower maintenance costs.

- Optional washdown construction allows thorough cleaning of interior components to remove contaminants and maintain high air quality. The floor design includes a continuously welded turned-up lip around the base perimeter with drains in each section, while casing choices include aluminum and stainless steel for corrosion resistance.

Quick and easy installations
- A single-point power design reduces the number of electrical connections that must be made to fully operate the air handler, minimizing installation work and expense.

- Flexible height, size, type and location of discharge plenum openings minimize duct transitions for quicker installation.

- Building information modeling (BIM) drawings are available to quickly and accurately incorporate a Trane Performance Climate Changer air handler into an HVAC system plan.
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