



WHY TRANE?



TRANE®

It's Hard To Stop A Trane.®

What Makes a TRUE Product Manufacturer?

While other manufacturers build their products from the same “pool” of parts available to anyone, Trane makes it a point to be uniquely better, innovative and always looking to the future.

Trane has been named "America's Most Trusted® HVAC System" for four consecutive years, since 2015.

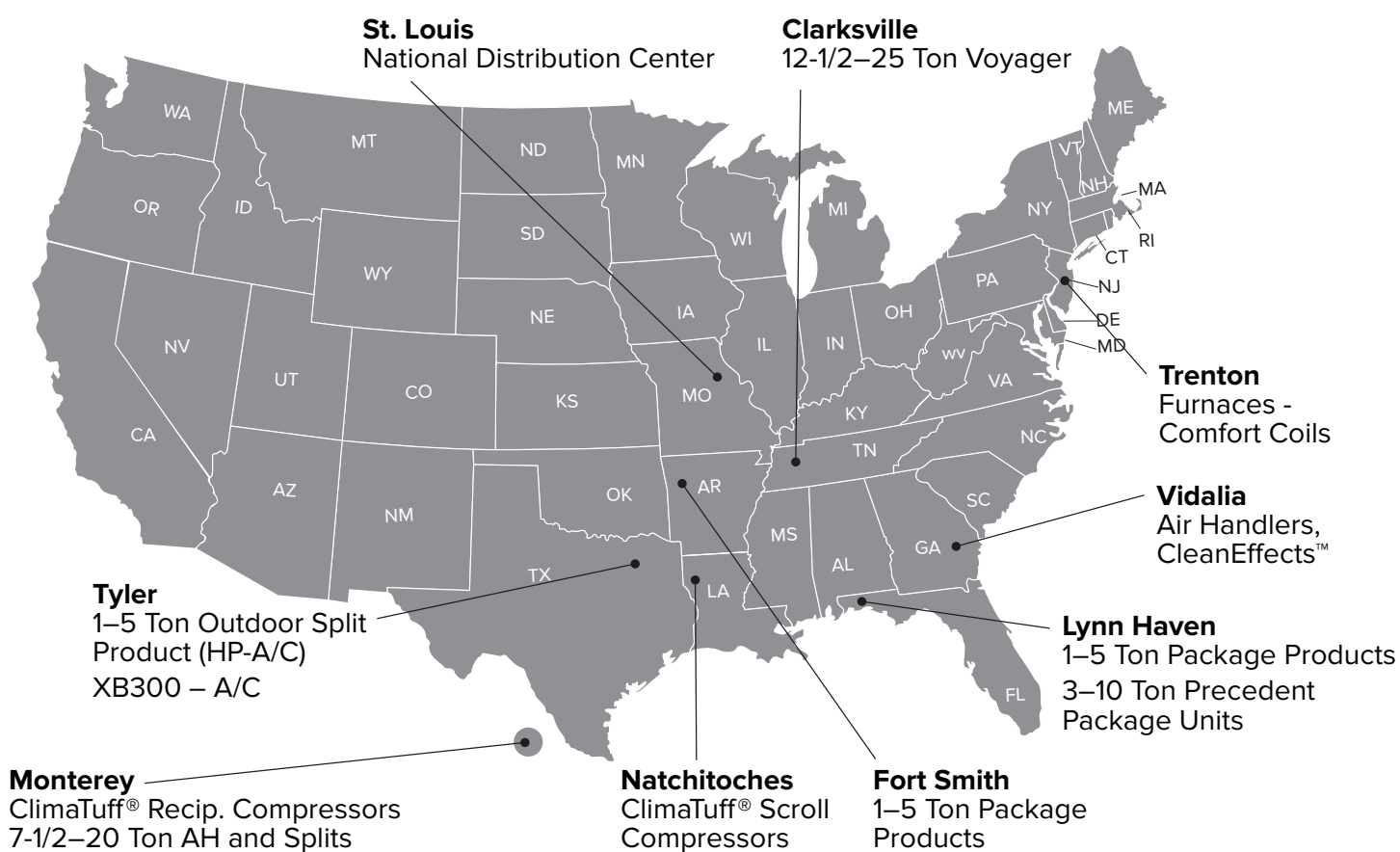


Trane is a TRUE Product Manufacturer:

When a company takes pride in its brand, it invests to ensure that the product it produces meets or exceeds expectations. This is why:

- Trane does not simply assemble their products. Trane designs and engineers its products from the ground up to ensure quality control from idea to installation.
- Trane invests heavily in the research and development of new comfort solutions, improved system performance and innovative technology, all to create trust and peace of mind for all users.
- From engineers to production line workers, Trane engages and empowers its associates to create a sense of pride and personal investment in their work.
- Products that bear the Trane name do so because they are built with Trane components. Trane designs, engineers and tests all of the major components in its equipment, including:
 - Compressors
 - Furnace heat exchangers
 - Indoor coils
 - Indoor unit airflow blower housings
 - Outdoor coils
 - Transitions, piping and manifolds

Where Do We Make Our Products?



Spine Fin™ Coil Technology

SUPERIOR RELIABILITY AND DELIVERED EFFICIENCY

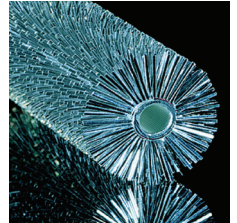
Aluminum foil can sit in a 500° oven for hours, yet it is cool to the touch within seconds of being removed. Why? Because aluminum is a metal that provides superior heat transfer. Heating and air conditioning is not possible without the thermal principle of heat transfer. In fact, heat transfer is one of the most important factors in achieving efficiencies and performance within your home.

Trane began full-scale production of the industry-exclusive all-aluminum Spine Fin™ coil technology in 1968. For more than 45 years, Spine Fin™ has outperformed the common plate fin coil, delivering superior reliability and efficiency over the life of the outdoor product.

Spine Fin™ provides extra corrosion protection in the harshest outdoor environments in and around cities and coastal regions.

Spine Fin™ is manufactured in continuous lengths, meaning that the Spine Fin™ coil has 90% fewer braze joints than a standard plate/fin coil (braze joints are the most common location of coil leaks).

The proven durability of Spine Fin™ enables the coil to deliver and maintain efficiency and performance over the life of the unit.



"**32% better** than copper tube aluminum fin"

"Technology tested by the **U.S. Navy**"



U.S. NAVY RESEARCH TESTIMONY

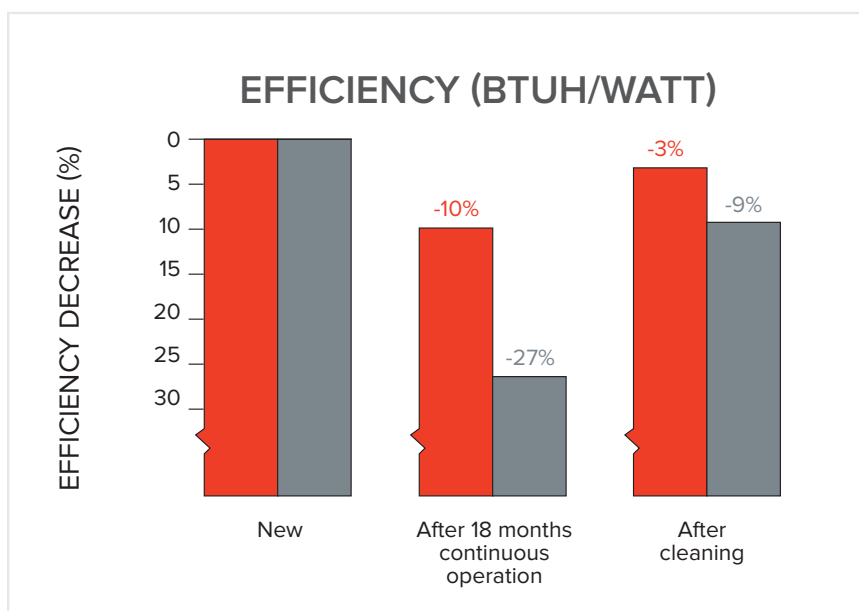
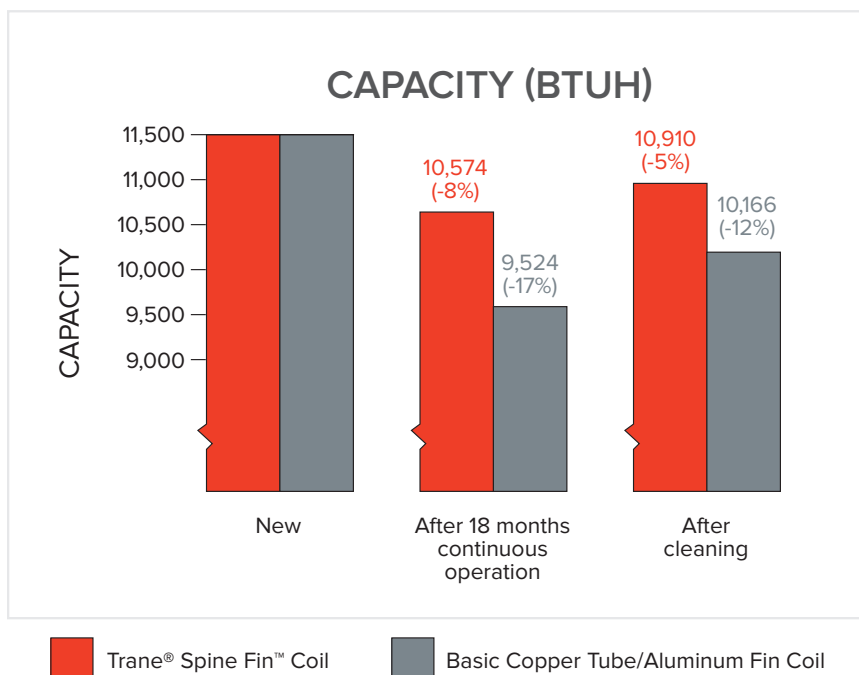
In a corrosive environment (coastal or urban), heat exchanger performance can degrade quite rapidly. According to an unbiased study performed by the United States Civil Engineering Laboratory,

Naval Construction Battalion Center in Port Hueneme, Calif., evidence of the fact, and support of all-aluminum coils in such environments is presented. Technical Report #N-1560 observes that after 24 months, aluminum tube/aluminum fin heat exchangers are performing 32% better than copper tube/aluminum fin units.

One conclusion of this research was that "uncoated aluminum tube/aluminum fin heat exchangers are more thermally efficient than the uncoated copper tube/aluminum fin heat exchangers after two years of operation in a temperate marine environment."



Why should time cost you money, performance and comfort?



You can't always trust what the label on the box says.

While a new and properly matched heating and cooling system may have documentation stating performance and efficiency, most new systems quickly decline in both capacity and efficiency after only months of operation.

Not Trane!

Trane's exclusive Spine Fin™ Coil Technology is designed to deliver near factory operation from day one and beyond. With proper installation and maintenance, you can trust that what the label on our box says is actually true.

Why should it be okay to lose efficiency and performance in your new heating and cooling system simply by using it? Understand the difference between performance and delivered performance over time.



S.E.E.T Facility Testing

- Some units endure more than 2,600 hours of continuous testing, including a full week of salt spray to monitor corrosion resistance.
- Our technicians have tried to break our Climatuff® compressor more than 900 ways. If a product doesn't make it through our test lab, it doesn't get made. "It's hard to stop a Trane" isn't just a tagline – it's been proven.

The Systems Extreme Environmental Test Lab is just one of many test our outdoor products are put to. It's where we pack a lifetime of Mother Nature's fury into 16 weeks of torture that would stand up to the harshest environment this planet has to offer.



Climatuff™ Compressor Technology

Compressor operation and performance is an essential component to Trane's concept of a truly engineered system. Just as Trane perfected the Spine Fin coil to deliver and maintain its performance over time, the Trane Climatuff has been extensively researched and tested to ensure quality, durability and longevity during the life of the outdoor unit.

- Trane designs each of their compressors to meet their specifications for quality and performance.
- The Climatuff compressor was the first successful heat pump compressor.
- Trane's Climatuff compressors are put through rigorous torture testing in our SEET facility designed to simulate five years of operation in the most extreme environments.
- Trane believes that units should be tested in the lab, not in a consumer's home.



Appearance, Durability and Safety

Trane provides quality throughout the entire manufacturing process making sure that every component provides an added benefit to the system.

WEATHERGUARD™ II TOP (XLI UNITS)

This attractive, Trane-exclusive design provides lasting protection, preventing debris or snow from accumulating inside the unit and causing internal damage.

Withstands 1,440 hours of 194° desert heat, 100ft/lbs of impact in -35° arctic cold and the impact of 90 mph



DURATUFF™ BASE PANS

Will not fade, crack, corrode or rust



ELECTROSTATIC POWDER COAT PAINTED PANELS AND FASTENERS

High-gloss finish, improved UV and weather durability

Even coating and coverage to protect the unit in addition to your family. No sharp edges or exposed rusted metal to create a hazard to children/pets



"MORE THAN JUST GOOD LOOKS."

Record Snow Fall,
Boston, Mass.

"XV20 keeps running!
Conventional heat pumps
(Trane included) had issues
with snow covering the fan
grill and stopped operating."



Trane TruComfort Systems

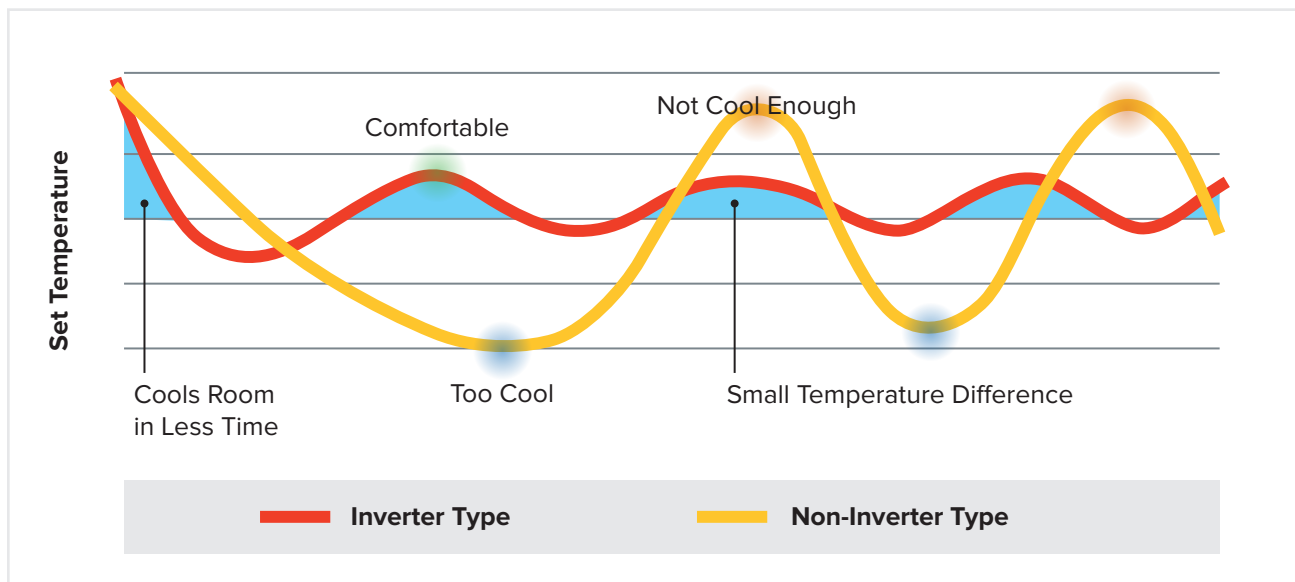
TRANE DOES VARIABLE SPEED BETTER

The Trane TruComfort™ systems give you precise comfort by running at the exact speed needed to keep your home comfortable. This allows the variable speed compressor, outdoor fan and indoor fan to vary operating speed and BTU as the temperature outside changes, slowing down or speeding up gradually in as little as 1/10 of 1% increments to keep comfort within 1/2° of the thermostat setting.

TruComfort Systems use the simplicity of Trane's ComfortLink II technology to provide sophisticated comfort, reliability and efficiency.

VARIABLE SPEED INVERTER TECHNOLOGY

Better components engineered to work together allows for the largest operating range and the smallest increments of modulation; it simply means that TruComfort does variable speed better than all of the rest.



TRANE ENGINEERED TECHNOLOGY

1/10 of 1% modulation of the Climatuff™ compressor means “next level” humidity and temperature control of the indoor environment.

Inverter drive control was built and designed to work specifically with the fully modulating Climatuff compressor, which provides compatibility and reliability.

The variable speed Climatuff compressor has the largest operating range in the industry providing comfort and efficiency when the others cannot.



Revolutionary Hyperion™ Air Handler

Every component of the Hyperion down to the smallest screw of the cabinet has been carefully designed to deliver reliability, comfort and efficiency.

THE HYPERION AIR HANDLER

A unique and innovative cabinet design

Positive pressure design keeps unwanted air out. This is the same concept used to clean rooms and hospitals and has less than 2% air leakage.

All-aluminum coil design helps eliminate refrigerant leaks and formicary corrosion.

Insulation value is double that of a standard metal air handler, delivering a true R4.2 value that eliminates cabinet sweating.

Electronic expansion valves are 400% more reliable than standard thermal expansion valves used in other air handlers, contributing to greater overall efficiency and system life.



RELENTLESS TESTING

Built to withstand any environment

The all-aluminum coil in our air handlers is more reliable than conventional copper coils. What does this mean for you? Our air handlers have a longer system life and less chance of refrigerant leaking into the atmosphere. All Trane electrical components are extensively tested and required to perform at reliability levels far exceeding standard longevity levels.



Delivered Comfort Over Time, No Matter the Weather

COMMITMENT TO QUALITY AND INNOVATION

The extraordinary Trane Hyperion air handler represents a substantial advance in air handling technology.

Using 14 industry-exclusive patents, the Hyperion offers significant advantages over other air handlers—advantages like refrigerator-styled insulation made without exposed fibrous material, which virtually eliminates sweating and condensation all while creating a safer environment for your home.

Trane Comfort™ Coils

The unmatched reliability and performance of Trane's Spine Fin coils provided Trane with unique knowledge and capability to once again set the industry standard by introducing all-aluminum indoor evaporator coils.

RELIABILITY

Trane revolutionized indoor coil technology by being the first to provide a solution for the destructive environmental process known as formicary corrosion causing widespread instances of coil leaks within copper tube indoor coils.

Trane demonstrated their commitment to developing long-lasting, quality products by taking the formicary corrosion issue head-on and providing a solution through the use of new and innovative technology.

ALL-ALUMINUM COMFORT™ COILS

With a strong heritage in aluminum outdoor coils, Trane has applied our innovative thinking to develop the industry's first all-aluminum indoor coil. Rust-resistant and reduced levels of corrosion, our all-aluminum evaporator coils set a new industry standard by reducing leaks that often occur from corrosives like salt or common household cleaning products.

Formicary Corrosion Test

Copper does not conduct heat nearly as well as aluminum; therefore, copper needs to be thinned and stretched during production, which makes it vulnerable to corrosion. Aluminum's superior ability to conduct heat means it can be made thicker and stronger during production, resulting in a more reliable, more efficient and more durable coil.

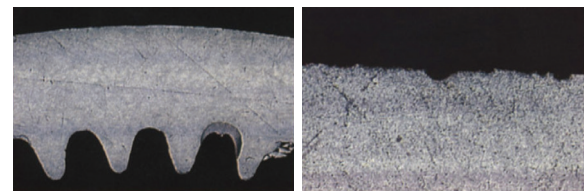
COPPER



62X

500X

ALUMINUM



62X

500X

TEST RESULTS

- Magnified results of an accelerated formicary corrosion test
- 127 days of exposure in an accelerated environment, aluminum tubes showed only minor surface corrosion
- After 12 days of exposure, copper tubes completely failed with through-wall penetration
- Corrosion Testing Laboratories, Inc. 2004

Trane S-Series Furnace

INDUSTRY-CHANGING DESIGN:

2-1/2 years of constant work, prototypes and continuous testing

Its “industry-first” furnace control board was designed to be the “brains behind the beauty” that allows faster, more accurate setups and more intuitive operation than ever before.

The new Vortica™ II blower was designed exclusively for the S-Series furnace but based on the original Vortica™ blower engineered by Trane more than a decade ago. It continues to quietly deliver superior airflow and efficiency.

Trane's exclusive Comfort-R™ mode of operation allows quieter system startups and shutdowns, greater efficiency and more thorough heat circulation. It also helps control humidity levels during the summer.



THE TRANE DNA

It's at the core of every Trane product: quality and reliability. And it's built into our new 34" tall S-Series gas furnace—along with innovative features that make it more efficient in both heating and cooling. And with a gas efficiency rating (AFUE) of up to 97%, the S-Series provides significant energy savings in winter and summer.

At Trane, we never settle for meeting industry standards; we strive to exceed them. So when the industry minimum testing requirement for a furnace heat exchanger is 10,000 cycles, we run it 25,000 times, subjecting it to rapid heating and cooling that will uncover any weakness in design or materials. It's harsh, but it's worth it. Because we build Trane furnaces to last, not just in the lab, but in your home.



When you trust Trane, you're trusting the leader.

Trane CleanEffects™

INNOVATION, TECHNOLOGY AND PERFORMANCE

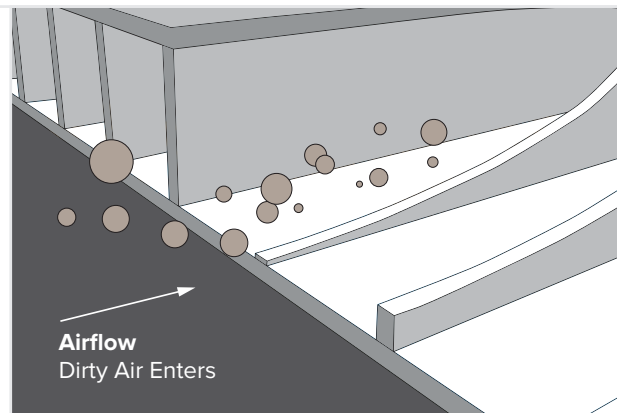
Trane CleanEffects uses patented, industry-leading technology to remove up to 99.98% of particles down to 0.1 micron from the air it filters—more than any other filtration system on the market.

Many common allergens, pet dander, dirt, dust and other household contaminants are no match for the 0.1 micron (100 times smaller than a single human hair) filtration of CleanEffects.

Trane believes that a heating and cooling system should clean as well as condition the air, and Trane CleanEffects uses superior technology to provide clean, healthy air 100 times better than a standard 1" filter.

Removes more than 99% of the flu virus, Influenza A, Influenza B, Influenza C and avian Influenza.

Exclusive fluted collection cell design is unique to the industry with approximately 700% more collection area than conventional electronic air cleaners; it's responsible for making MERV ratings obsolete.



The patented Intense Field Dielectric, or iFD, technology is partly the reason CleanEffects leads the industry in clean air. Unlike conventional EACs from the '50s, iFD charges equally across the whole corona field.

SMALL PARTICLES, LARGE EFFECTS

Particles like dust, smoke and bacteria are often 0.3 microns or less. At that size, allergens can get deep into your lungs because they aren't filtered well by your nose and throat. An effective Trane air cleaner, such as Trane CleanEffects, can reduce the presence of potential asthma and allergy attack triggers in your home, like dust, pollen, pet hair and dander, dust mites, mildew, lint, fungus, most tobacco smoke, cooking grease and even bacteria.

ASTHMA & ALLERGY FRIENDLY® CERTIFIED by the Asthma and Allergy Foundation of America

With more than 60 million Americans suffering from asthma and allergies, this certification mark guides consumers in identifying products more suitable for people who suffer from these issues. The Asthma & Allergy Friendly® certification mark is awarded only to those products that are scientifically proven to reduce exposure to asthma and allergy triggers.



Current Nexia™ Enabled Trane Comfort Controls

TRANE COMFORTLINK™ II – XL1050

- High-definition 7.0" color touchscreen
- Wi-Fi or ethernet
- Nexia diagnostics ready
- Simple control of humidity and dehumidification with humidity display
- Allergy, quick clean and hourly fan cycle controls
- Built-in Nexia Bridge
- Connect 200+ Z-Wave devices
- 5-day weather forecast, radar and alerts
- User Wizard
- Upgradeable
- Simple easy-to-use home screen
- Weekly & monthly run time monitors and displays

An unprecedented command center that integrates technology and comfort with anyone's lifestyle



TRANE XL850 SMART CONTROL

- 4.3" color display
- ComfortLink II communicating control; no 24V operation (see XL824)
- Built-in Nexia Home Intelligence Z-Wave Bridge: Connect more than 200 Z-Wave devices to the Nexia Home Intelligence home automation system
- Wi-Fi connectivity allowing free remote access and control with Nexia Home Intelligence
- 5-day weather forecast and weather data with internet connection
- 7-day programmable, up to 4 schedules per day
- Humidity and dehumidification control with humidity display
- Energy-saving mode
- Wi-Fi connectivity also provides future-proof software that can be updated and upgraded easily



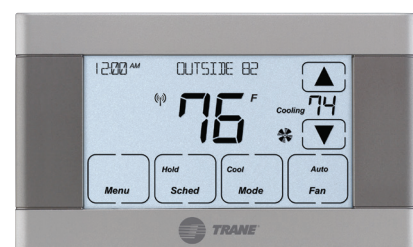
TRANE XL824 SMART CONTROL

- 4.3" color display
- Built-in Nexia Home Intelligence Z-Wave Bridge: Connect more than 200 Z-Wave devices to the Nexia Home Intelligence home automation system
- Wi-Fi connectivity allowing free remote access and control with Nexia Home Intelligence
- 5-day weather forecast and weather data with internet connection
- 24V Compatibility; no ComfortLink II communicating
- 7-day programmable, up to four schedules per day
- Humidity and dehumidification control with humidity display
- Energy-saving mode
- Wi-Fi connectivity also provides future-proof software that can be updated and upgraded easily

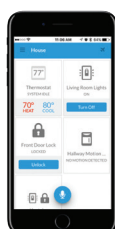


TRANE SMART CONTROL

- 4.3" black and white display
- 7-day programmable, up to 4 schedules per day
- Humidity and dehumidification control with humidity display
- Energy-saving mode
- Free remote access and control with Nexia
- Upgradeable software capabilities*



*Trane Smart Control connectivity may require the Nexia Bridge





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