



# *Trane Services*

*Making buildings better for life*





## *Experts at your service*

With a comprehensive range of service capabilities and in-house expertise, delivered by an extensive service network always on call, Trane service solutions ensure the most reliable and cost-effective performance from your HVAC systems from day one – and on through their complete lifecycle.

### **The challenge of peak system performance – and how to meet it**

Whether it is a process application in an industry or a comfort application in a building, the HVAC system plays a critical role in influencing overall operational efficiency. Therefore its role has to be taken into account when defining your strategic business objectives and determining how best you can meet them.

How efficiently and cost-effectively does your HVAC system operate right through its lifecycle? And how can you ensure that its operation and maintenance always contribute positively to the strategic objectives of your business?

Because operation and maintenance are a big part of your overall budget, decisions concerning how your HVAC system is serviced and maintained are strategically important. You have to take into consideration factors such as total cost of ownership and the return on investment that can be realized over time. HVAC systems account for around 40 to 60% of buildings' total energy use depending on applications and climate conditions. It is clear, therefore, that they present perhaps the greatest opportunity of all to reduce wasteful consumption.

Trane Services take into account all of these demands, and balance them in order to offer you effective support in increasing reliability, improving total cost of ownership and reducing environmental impact.

## The Trane advantage – A team of experts

As a global company that has provided almost 100 years of industry leadership, Trane brings you an abundance of collective knowledge:

- **Top industry engineers, technicians and support staff** are dedicated to working with you on an on-going basis throughout Europe, Middle East, Africa and India:
  - Over 1100 service professionals
  - Over 850 factory authorized technicians
- **A commitment to safety** lies at the heart of all Trane service activities, with carefully developed standards and procedures rigorously enforced to ensure the highest standards of ongoing safety for both your system and everyone who comes into contact with it.
- **Clearly defined processes and service tools** to ensure on time execution of all service commitments throughout your system's lifecycle.
- An **extended network with 130 sales and service locations** at your service throughout Europe, Middle East, Africa and India.
- **Trane local support** at the highest global standards wherever your building or plant is located.
- **Trane's drive to reduce impact on the environment** includes adhering to global and regional regulations on energy use, carbon emissions and refrigerant handling

– backed by Trane technicians who operate using paperless reporting systems.

- Trane has developed innovative concept and methodology for high performance buildings designed to help you leverage your building to realize your organizational mission.

### **The Trane High Performance Buildings**

approach will assure that you reach your goals aligned to four core areas of building performance:

1. Lifecycle management
2. Energy efficiency
3. Occupant health and safety
4. Environment sustainability



# The Trane service solutions portfolio

Trane service and support capabilities span every step in your system's lifecycle, from initial start-up, through routine operation, monitoring and maintenance, to system upgrading and improvement. So whatever your requirements – and however they change and develop through the years – you can always

turn to Trane for professional service and support. We will work in close partnership to select the right actions that correspond to your business needs. Trane Services offer solutions to ensure your HVAC system's reliable operation and optimal performance.

	Trane Elite Start™ and Extended Start	Genuine Parts and Repair Services	Trane Chiller Health Check Program	Trane Service Agreements	Trane Select™ Contracts	Trane Controls Services	Trane Care™ Services	Trane Intelligent Services	Trane Rental Services
	Foundation for high performance buildings	Comprehensive OEM parts	Inspect chiller operating conditions	Planned maintenance	Comprehensive service contracts for HVAC systems	Solutions for sustainable high performance buildings	System enhancement service solutions	Remote monitoring with a professional advantage	Keep your customers cool during emergencies
	Benchmarking baseline parameters	State of the art logistics	Evaluate basic and critical parameters	Minimize downtime and extend equipment life	Improve reliability and performance	Maintain system fitness	Reliability, energy and environmental solutions	Close monitoring and analysis of system trends	Solves capacity issues when it gets hot
	Monitor and adjust system critical parameters	Factory authorized technicians	Recommend upgrade and improvement solutions	Reduce operating costs	Improve costs of ownership	Optimize system performance	Improve comfort and operating efficiency	Critical alarm management and event log	Supports temporary cooling and fast track projects
<b>Start-up</b>	■								
<b>Operate and maintain</b>		■	■	■	■	■			
<b>Improve cost of ownership</b>					■	■	■	■	
<b>Upgrade and improve</b>							■		
<b>Advanced remote analytics</b>								■	
<b>Contingency cooling</b>									■
<b>Environmental solutions</b>							■		

## Start-up

You chose a Trane HVAC system because you want an advanced, high performance system that you can rely on for years to come.

But as you know, a number of installation and situational variables can impact the performance and reliability of your systems; the following services will make sure your HVAC system investment gets off to the right start.

### Trane Elite Start™

#### Commissioning service

Trane Elite Start™ services ensure that your new equipment or system is properly started up and operates at design parameters.

Main features:

- **Start-up:** following prescribed engineering checklists to ensure all equipment functions meet operational parameters in a reliable and efficient manner.
- **Operation:** from startup, ensures new Trane products will operate within design parameters.
- **Performance:** assures new Trane products will operate at peak reliability and efficiency. These services are available for all Trane products.



### Trane Extended Start

#### Assure the highest level of performance for your HVAC system's crucial first year

HVAC systems are typically sold with a standard factory warranty terms and conditions. Trane Extended Start goes above and beyond the standard warranty to provide eight value added services which will create a system performance baseline. This offering demonstrates that warranty is not a substitute for service on any mechanical equipment. Two important steps to assure first year performance:

- **Validation of installation and startup.**
- **Monitoring** of critical parameters and adjusting system settings.

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### SUCCESS STORY

A multi-specialty hospital in Turkey selected Trane Elite Start™ and Trane Extended Start for their two air-cooled chillers. Proper start-up and periodic system performance checks during the first year of operation provide ideal conditions in patients rooms, operating suites and ICUs for optimal healthcare delivery.





## Operate and maintain

From periodic to predictive maintenance, Trane offers a full range of planned service agreements and contracts tailored to your business and application needs. They have been designed to provide operating efficiency, optimize your system life and help you cut costs.

### **Genuine Parts and Repair Services** **All your parts needs and the OEM expertise quickly available**

From precision-crafted original Trane items to generic parts, Trane offers a comprehensive parts inventory with 6,500 references to answer quickly to customers' needs. This means finding the right part, along with practical OEM advice. Whether you are looking for compressors, controls, electrical supplies, HVAC accessories, chemicals, or tools and tests equipment, we can give you a competitive edge. Trane efficient logistics and factory-authorized technicians also ensure expert replacements and fixes.

### **Trane Chiller Health Check Program** **OEM chiller performance analysis**

The reliability and efficiency of your water chiller are directly related to how it is maintained and operated. A lack of proper care can lead to severe malfunctions and costly breakdown. Trane Chiller Health Check Program provides the real time status and performance of your equipment and recommends proactive measures to restore a safe, reliable and efficient operation of your chiller. Basic and comprehensive program levels are available.

### **Trane Service Agreements** **Reduce operating costs and optimize the life of your equipment with planned maintenance from Trane**

Your building and HVAC systems have to perform reliably, and downtime is never tolerated. Meanwhile, you're expected to control costs. Managing a facility would be so much simpler if you could just reduce system inefficiencies and prevent downtime.

The key is predictive maintenance. By planning ahead and addressing maintenance needs on a systematic, scheduled basis, you can save significantly and virtually eliminate unplanned downtime. Trane will help you define the service agreements best suited to your needs.



#### **SUCCESS STORY**

A large District Cooling provider in UAE turned to Trane for OEM parts and repair services for their five Duplex centrifugal chillers. They later opted for a service agreement with Trane resulting in reliable operation of the district cooling plant. Unplanned downtime has been completely eliminated.

## Improve cost of ownership

To keep your system operating at top efficiency, Trane Select™ Contracts and Trane Controls Services provide total service solutions. Both programs offer four levels of coverage, ranging from preventive maintenance programs to fully comprehensive solutions. We stay one step ahead of your equipment and controls needs and bring you complete peace of mind.

### Trane Select™ Contracts Head off problems before they affect operation

Trane Select Contracts take scheduled maintenance to the next level. With a Trane Select agreement, you receive all the benefits of a scheduled agreement, plus parts and labour coverage.

We work with you to select the major components and systems in your facility that you want Trane to manage. We cover the cost of repairing your system or replacing the preselected components should they fail. Your equipment will receive regular inspection, predictive maintenance and proper calibration. Trane helps you consider acceptable performance ranges, reliability

and risk tolerance to determine the level of coverage you require. In choosing your level of coverage, you know exactly what services and parts are covered and can predict your maintenance costs.

### Trane Controls Services Keep HVAC settings fine-tuned for optimal performance

Your building is a complex, inter-related set of systems. Over time lots of small changes can cause major shifts in comfort, efficiency and safety levels. Trane Control Services is your strategy to maintain system fitness.

Our engineers will treat your building controls system as an integrated whole and when changes are necessary they will take appropriate programming actions to ensure there are no negative effects elsewhere in the system.

Trane Controls Services offers you the benefits of:

- Sustainable high HVAC performance
- Maintaining system fitness
- Optimized building operation mechanisms

Research involving all makes and models of HVAC systems has indicated that a predictive maintenance schedule can:\*

- Cut unexpected breakdowns by 70%-75%
- Reduce downtime by 35%-45%
- Lower equipment repairs and maintenance costs by 25%-30%
- Reduce energy consumption by 5%-20%

#### SUCCESS STORY

A major metal industry in Poland improved their cost of ownership by selecting a Trane Select level 3. The company realizes operational savings of up to 19% for their 3 centrifugal chillers. Thanks to Trane Select Level 3 the required process uptime is maintained and the plant meets their productivity targets.



#### SUCCESS STORY

One of the largest real estate companies in India selected Trane Controls Services to restore and maintain the design conditions of their HVAC installation in all their corporate buildings. The company saves up to 17% per year in energy costs and provides a comfortable and healthy working environment to all their occupants.





## Upgrade and improve

### Trane Care™ Services

#### Restore the performance of HVAC equipment and maximize its lifecycle

Building owners and companies in all markets face new challenges and embrace a world full of change:

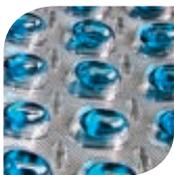
- Innovation
- Reorganization
- Compliance
- Reprioritization

We are ready to help restore and modernize your HVAC installation to meet your current needs.

No matter where your equipment is in its lifecycle, Trane Care™ will turn your HVAC systems into business advantages in terms of reliability, energy and environment to help your building perform at its best and sustain it day in and day out:

- **Renewal services**
- **Technology upgrades**
- **Replacement/repair decision consultations**

We have the same goal: your business success. Trane Care™ offers an extensive array of upgrade products to answer our customers' top business priorities:



#### SUCCESS STORY

The installation of Trane Care™ Adiabatic Cooling on seven air cooled chillers at a multinational pharmaceutical plant in France provided a long-term solution to maintain a reliable and energy efficient process cooling for their facility. Adiabatic cooling decreases the temperature of air entering the coil enhancing chiller performance.



#### SUCCESS STORY

A world leader in electronics needed a cost effective way to better manage the energy efficiency of their multiple facilities in Italy. Trane Care™ Automatic Tube Cleaning system installed on their 20 centrifugal chillers delivers the expected operating efficiency and energy savings with an estimated 16-month payback on investment.

### Reliability solutions

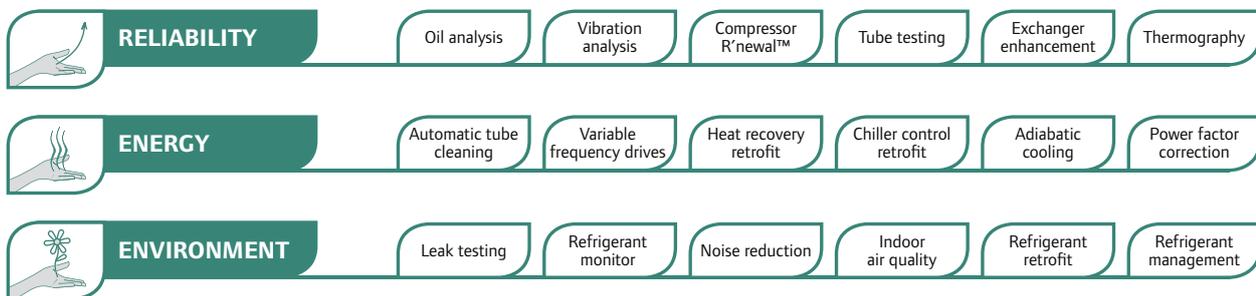
Our service experts will identify where your HVAC installation is not performing to its full potential and offer the solutions that will restore like-new reliability. Reliability solutions can help reduce risks of costly breakdowns, improve your system operation, and optimize your equipment life.

### Energy solutions

Trane Care™ offers cost-effective solutions to optimize the energy efficiency of your existing system and generate immediate savings. We will advise you on how best to spend your operating budget and if we find that it would be better for you to replace the whole system we can do that too.

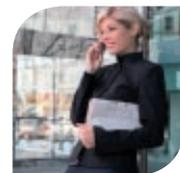
### Environment solutions

The environmental foot print of commercial and industrial buildings is becoming particularly important. Occupational health, comfort and safety of a building and its compliance with national and local legislations are also of major concern. Trane Care™ provides environment solutions that reduce building and system impacts on the environment and human health.



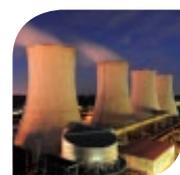
#### SUCCESS STORY

A leading financial and banking sector firm in UK chose Trane to upgrade and retrofit their four aging centrifugal chillers. Based on the results from Trane Care™ oil and vibration analyses, Compressor R'newal was carried out to retrieve the original compressor reliability and performance. Trane Care AdaptiView™ retrofit and Tube testing analysis were also performed to optimize the whole chiller performance. With reduced downtimes and reliable operation of the chiller plant, building occupants now work in ideal conditions.



#### SUCCESS STORY

A leading energy generation company in Germany performed Trane Care™ refrigerant retrofit on their existing chillers to keep in compliance with environmental regulations and avoid capital cost investment on new equipment.





## Advanced remote analytics

### Trane Intelligent Services

#### Close remote building system monitoring and analysis of system trends

Trane Intelligent Services provide always-on, automated monitoring powered by a suite of leading technologies backed by Trane's team of technical experts. They give building operators high end capability to help minimize the occurrence and severity of system failures through early detection of alarms and performance issues. Whether you require continuous monitoring and automated notification or monitoring plus an action plan for remediation services, Trane can provide a cost-effective solution.

If you need to consolidate or centralize your operations, Trane Intelligent Services can deliver the consistent outcomes you want, at a fraction of the costs you would incur to set up the capabilities in house. Trane invests in leading technologies and top notch personnel, so you don't have to.

The Trane Intelligent Services portfolio includes:

#### ① Alarm Notification

Sends immediate notification enabling the customer to take prompt action to remediate potential system failures. Timely detection and automatic notification of critical system alarms avoid off-shift labor and untimely emergency response hassles.

#### ② Active Monitoring

Provides the benefits of Alarm Notification plus alarm management, timely diagnosis and intelligent mobilization of local resources. Recommended action to system failures conveyed by Trane specialists to local technicians yields high first time fix rate.

#### ③ Building Performance

Provides the benefits of above two levels plus open gateway to Trane expertise and recommendation to keep your building operating at peak efficiency. Close monitoring and analysis of the system trends by Trane analytical programs and technical specialists elevates decisions regarding HVAC system performance to a strategic business level.



#### SUCCESS STORY

A supermarket chain in UK chose Trane Intelligent Services for remote monitoring of critical alarms generated by their HVAC equipment. Alarm notification allows the store manager to stay ahead of the game while a Trane expert remotely diagnoses detected problems and takes corrective actions before customer comfort is affected. The supermarket is more confident knowing their refrigerated and fresh products are protected and proud to optimize their customers' shopping experience.

## Contingency cooling

### Trane Rental Services

#### Cooling solutions for all your temporary needs

Whether it's extra cooling needed during extreme weather conditions or a short term replacement following an emergency, businesses sometimes require equipment for process cooling or to cool an indoor environment on a temporary basis. The Rental Services provide safe, fast and cost-effective solutions using modern and reliable equipment to keep your temporary cooling needs covered so that your business stays operational during repair, replacement or upgrade of the existing system.

Rely on the temporary cooling solutions from the name you trust. Our team of engineers, factory authorized service technicians and logistics partners can rapidly transform the equipment you need into a smoothly functioning system that will exceed your expectations.



#### Trane has you covered

Trane Rental Services deliver state of the art equipment and expertise. We will be your one stop solutions provider when you are:

- Short on time
- Short on capital budgets
- Risk averse
- Experiencing temporary spikes

Trane Rental Services is your go to resource for:

- **Seasonal capacity needs**
- **Emergencies**
- **Planned service work**
- **Facility expansion and renovations**
- **Specialty events**
- **Contingency planning**

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#### SUCCESS STORY

Ice rink event management companies in Italy and Romania partnered with Trane Rental Services for their ice rink chiller needs. The successful events brought high satisfaction to their customers. Trane rental chillers are fitted with enhancements that save installation time while maintaining the safety and reliability of equipment, even in rugged conditions.



#### SUCCESS STORY

During an emergency failure of their primary cooling system, a telecom company in India was able to keep their large data center online with Trane Rental Services. The company kept their customers happy and continued their business operations during the emergency period while their facilities team took the time to repair the system.



# High Performance Buildings

Your Mission. Realized.

Efficient Systems

Controls

Services

Turnkey Solutions

## Services Portfolio

### Trane Elite Start™



- Validate installation
- Engineering checklist for optimal start up
- Verify and record design operational parameters

### Trane Select™ Contracts



- Comprehensive Service contracts for HVAC systems
- Improve reliability and efficiency
- Improve cost of ownership

### Trane Extended Start



- Foundation for high performance buildings
- Benchmarking baseline parameters
- Monitor and adjust system critical parameters

### Trane Controls Services



- Solutions for sustainable high performance buildings
- Maintain system fitness
- Optimize system performance

### Genuine Parts and Repair Services



- Comprehensive OEM parts
- State of the art logistics
- Factory authorized technicians

### Trane Care™ Services



- System enhancement service solutions
- Reliability – Energy – Environmental Solutions
- Improve comfort and operating efficiency

### Trane Chiller Health Check Program



- Inspect chiller operating conditions
- Evaluate basic and critical parameters
- Recommend upgrade and improvement solutions

### Trane Intelligent Services



- Remote monitoring with professional advantage
- Address key operational challenges
- Critical alarm management and event log

### Trane Service Agreements



- Planned maintenance
- Minimize downtime and extend equipment life
- Reduce operating costs

### Trane Rental Services



- Temporary cooling solutions
- Reliable equipment and fast service
- All building purposes

#### Footnote

\* Operations and Maintenance Best Practices: A Guide to Achieving Operational Efficiency U.S. Department of Energy, Federal Energy Management Program, August 2010.



Ingersoll Rand (NYSE:IR) is a world leader in creating and sustaining safe, comfortable and efficient environments in commercial, residential and industrial markets. Our people and our family of brands—including Club Car®, Ingersoll Rand®, Schlage®, Thermo King® and Trane®—work together to enhance the quality and comfort of air in homes and buildings, transport and protect food and perishables, secure homes and commercial properties, and increase industrial productivity and efficiency. We are a \$14 billion global business committed to sustainable business practices within our company and for our customers.

Trane has a policy of continuous product and product data improvement and reserves the right to change design and specifications without notice.  
Trane bvba, Lenneke Marelaan 6, 1932 Sint-Stevens-Woluwe, Belgium, ON 0888.048.262 - RPR Brussels