What are you looking for in a control's company?

A partner, more than a supplier.

Local support that you can depend on.

A company with a history of quality and a commitment to your future.

Knowledgeable people who respond when you need them.

Reliable, proven technology.

After being a leader in the air conditioning industry since 1913, The Trane Company made a commitment to the controls industry in 1978. Since that time the Trane Building Automation Systems Business Unit has delivered on that commitment to the buildings controls industry.

Today Trane controls are installed in tens of thousands of buildings around the world. People in schools, offices, hospitals, hotels, restaurants and theaters are comfortable because they have Trane controls in their buildings. Critical process systems like pharmaceutical factories, textile mills, and printing plants maintain strict temperature and humidity control conditions using a Trane building automation system.
Financial options

The Trane Company can help you finance a new or renovated control system for an existing building. PACT™, Performance Agreement for Comfort from Trane, is one way to finance the system without up-front capital. A facility analysis by Trane energy auditors will identify mechanical system improvements and building infrastructure renovations that will yield annual energy savings to pay for the renovations and improvements. PACT brings together a team of experts to work with business owners to develop a program tailored specifically for their facilities. Trane manages the project, monitors results, and guarantees savings with no up-front capital expenditure.

Local support

Trane sells building control software and equipment through sales offices around the world. Those offices provide system selection advice and building analysis during the design phases of a project. The Trane sales consultant continues to work with customers through the construction and commissioning phases of a project.

When the project is complete, Trane can provide local support through the life of your building:

- Technical service in case of an emergency
- Preventive maintenance to keep your system operating reliably
- A full line of replacement parts in local inventory

Total system support
Integrated Comfort™ System (ICS) Institute in St. Paul, Minnesota, USA. The ICS Institute features a unique, hands-on classroom equipped with the full line of Trane control equipment to simulate a complete building system.

Training
To ensure that operators learn about the many functions of their building control systems, Trane offers several levels of training. Operator training classes are available at many Trane sales offices, at regional locations, or from the Trane Integrated Comfort™ System Institute.
An Integrated Comfort system combines Trane HVAC equipment with factory installed unit controls together with a Trane building automation system. The benefits that can result from an Integrated Comfort system are impressive:

- Higher efficiency because the components are optimized for system performance
- Better reliability because the equipment is designed to work together
- Lower installation costs because the HVAC equipment has turnkey factory controls
- Faster occupancy because factory commissioning makes installation and startup faster
- Less system downtime with in-depth diagnostics to identify problems before they become serious

For new and existing buildings, Trane controls can be field mounted on Trane equipment, non-Trane products and ancillary components.

**Single source simplicity**

In addition, owning a Trane Integrated Comfort system is easier because the components are manufactured, installed, warranted and serviced by a single source, The Trane Company. Should problems arise, there's no finger pointing between the equipment company and the controls manufacturer. In a system with equipment from multiple manufacturers, there's a risk of finger pointing to find the party responsible for the problem.
Interoperability

System designers and building owners today expect that system components from different equipment manufacturers will be able to communicate with each other, that is be interoperable. Trane supports both of the leading interoperable communications standards: BACnet®, at the system level and LonTalk®, at the unit level.

Thousands of Trane interoperable systems have been installed since the Tracer Summit® building control unit, a native BACnet device, first shipped in 1993. Typical applications for BACnet at the system level include the integration of HVAC, lighting and fire alarm systems. LonTalk at the unit level provides a common platform for integrating complimentary controllers such as variable speed drives, generators and power monitoring equipment from third party suppliers.
Building controllers

For medium to large buildings

The Tracer Summit system is well suited for medium to large buildings, or a campus of buildings. Using mainstream technologies like internet communications, the Windows® operating system and a web browser, Tracer Summit delivers dependable building management solutions for a variety of new and existing buildings.

Viewing a Tracer Summit system is as easy as point and click. Graphical floor plans, equipment images and system schematics can be linked together to provide operators with a virtual tour of their buildings. Extensive usability testing during the development of Tracer Summit helped to make the system easy to use.

Pre-engineered and pre-tested application programs are standard in Tracer Summit software. As an equipment manufacturer, Trane understands how to protect the valuable investment in a building’s comfort system.

Tracer Summit System Features

• Alarm notification and an alarm log
• Time of day scheduling, including optimum start/stop and night economizing
• Area control to coordinate HVAC equipment and lighting
• VAV air system control for energy efficient, indoor air quality strategies
• Reports and trends
• Coordination of chillers, pumps and cooling towers
• Custom programming support
• High speed Ethernet LAN or ARCNET® communications between control panels
• Installs on a dedicated or internet protocol compatible network
• Remote communications, using modems
• Multiple language and units of measure support
• Optional Tenant Services program for tracking and billing of after-hours usage

Benefits

• Reduced operating costs through energy management strategies
• Flexibility to grow with building expansion or remodeling
• Easy to learn, easy to use graphical user interface
• Consistent, reliable operation with standard, pre-engineered and pre-tested applications
• Easier, faster troubleshooting with in-depth data and diagnostic information
• Advance notice of system problems before they become an emergency
• Automatic printing or saving of reports for analysis or regulatory purposes
• Quick, at-a-glance graphical views of current building status
• Flexible, multi-level operator security
• Truly open communications to BACnet-compatible subsystems or non-Trane equipment

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For small to medium buildings

The affordable choice for small to medium buildings is the Tracker™ building controller. The Tracker controller provides control and monitoring of packaged HVAC equipment and room controllers. Other components such as lighting and exhaust fans can also be integrated into a Tracker system. Tracker is available in three models to match the unit capacity and feature capabilities of different building needs.

Tracker Building Control Features

• Time of day scheduling
• Optimal start
• Trend log
• Demand limiting
• Timed override
• Remote communications
• French or Spanish alternate language display
• Fahrenheit or Celsius alternate temperature display
• Alarm log

Benefits

• Easy to use, affordable building control
• Efficiently matches equipment operating times to comfort needs
• Provides monitoring and control either onsite or from a remote location
• Multiple language support suitable for international installations
• Allows the flexibility to temporarily turn on equipment after hours
• Reduces peak power demand without jeopardizing occupant comfort
• Can operate from the local keypad or from a personal computer
Controllers for every building need

Monitoring for a wide range of HVAC and other applications. Typical uses include controlling air handling equipment, interfacing with water chillers and boiler systems, as well as controlling pumps and cooling towers. Available with an operator display and three enclosure options for mounting either indoors or outdoors.

Universal programmable control module – a large, programmable, direct digital controller that provides control and monitoring for a wide range of building equipment. Typical uses include controlling air handling units, monitoring chiller plants including pumps and cooling towers, and serving as a central point-gathering panel. Available with an operator display and several enclosure options for mounting either indoors or outdoors. Supports up to six operator-selectable, input/output cards.

Application specific controllers

Application specific controllers provide custom control interfaces to specific types of equipment, or for particular types of applications.

Tracer zone controllers – are the next generation of unit controls for terminal products, using the LonTalk-based interoperable communications protocol. These controllers are available both factory mounted and field installed. The Tracer zone controllers can be applied to fan-coil units, cabinet heaters, blower coils, water source heat pumps, and unit ventilators. A Tracer Loop Controller can be applied to water source heat pump systems to provide standalone control or integration into a Tracer Summit building management system.

Lighting control panel – The Tracer lighting control panel manages building lighting circuits according to time of day schedules and local switch inputs. The lighting controller can operate as a standalone device or interface to a Tracer Summit building management system to integrate the HVAC and lighting systems. A telephone interface may complement the system by providing easy override access to any building occupant with a touch-tone telephone.

General purpose controllers

General purpose controllers link equipment without unit control modules and non-Trane equipment into an Integrated Comfort system. These controllers also collect data from equipment and sensors, then report the data to the building management system. General purpose controllers can also serve as standalone controllers for a single piece of equipment or a subsystem. Trane offers three models of general purpose controllers.

Thermostat control module – an interface between the building control panel and equipment not having Trane unit control modules, such as lighting, fans, and non-Trane unitary equipment normally operated by a standard thermostat. Available in standard ambient, extended ambient and weatherproof enclosures.

Programmable control module – provides direct digital control and monitoring for a wide range of HVAC and other applications. Typical uses include controlling air handling equipment, interfacing with water chillers and boiler systems, as well as controlling pumps and cooling towers. Available with an operator display and three enclosure options for mounting either indoors or outdoors.

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Sensors

Trane sensors provide the accuracy and repeatability required by DDC control. These sensors are compatible with a variety of Trane building systems, general purpose and application specific controllers, as well as unit control modules.

Room temperature sensors – available in several variations, including setpoint adjustment and override switches.

Wireless VAV temperature sensors – uses spread spectrum technology to transmit room temperatures in a variable air volume (VAV) system. Easily moved in today’s modular interior spaces.

Outdoor air temperature sensors – housed in a weather-resistant enclosure.

Humidity sensors – to measure room, duct, and outdoor air relative humidity.

Pressure sensors – for monitoring building static pressure, differential water pressure and duct static pressure.

Carbon dioxide sensors – to measure carbon dioxide levels in a room or in a duct.

Unit controllers

Trane microelectronic unit-mounted controllers are wired, commissioned and tested in the factory. Installation and startup of equipment with factory-mounted controls is faster and less expensive compared to unit controls requiring field labor to wire and mount. When used with a Tracer Summit building management system, the unit controllers provide diagnostic and troubleshooting information that helps ensure the reliable operation of the comfort system through the life of a building.

Trane HVAC products available with factory-mounted unit controllers include:

• Large and small chillers, air and water cooled
• A variety of Trane rooftop air conditioners
• Split system units
• Commercial self-contained units
• Comfort air handlers
• Custom comfort and process air handlers
• Variable air volume terminal units
• Rooftop zoning systems
• Fan-coil air conditioners
• Unit ventilators
• Blower coils
• Water source heat pumps

For existing buildings, retrofit unit controllers are available for chillers and variable air volume units.
System solutions

The following examples illustrate the range of solutions possible from Integrated Comfort systems.

**Rooftop/VAV systems**

The Trane large variable air volume (VAV) rooftops, building management equipment and VAV units form a system typically used in offices, schools, theaters and retail stores. The Tracer Summit system places the rooftop in the appropriate operating mode based on the time of day, ventilation requirements, and other factors. Up to 48 rooftop unit diagnostic messages, providing valuable troubleshooting information, are available through the Tracer Summit system.

**Quiet comfort**

Using the Trane acoustics program and engineering data, sound conditions for the Trane large rooftop can be modeled for your building. The program recommends sound attenuation methods that can lead to the quietest possible building design.

**Chiller plants**

Tracer Summit Chiller Plant Control is a standard, pre-tested application program that controls up to 25 chillers of multiple types and sizes. The program is well suited to ice storage systems, dual fuel chiller plants, as well as comfort and industrial applications. Chiller sequencing routines can optimize the overall chiller plant energy efficiency by rotating individual chiller operation to equalize runtime and by matching capacity to the building cooling load. Pumps and cooling towers are coordinated with the chiller operation for even greater energy efficiency.

Easier monitoring and troubleshooting

Only Trane Chiller Plant Control has status screens to display both current operating conditions and upcoming automated control actions to add or subtract a chiller. If a problem occurs, the chiller plant operator receives an alarm and a diagnostic message to aid in troubleshooting. A snapshot report showing the status of critical operating parameters prior to a shutdown helps an operator determine the cause of the problem.

**Automatic reports**

Standard, preformatted reports for individual or multiple chiller systems list key operating data for troubleshooting or verifying performance. A report template that logs the refrigerant management data specified in ASHRAE Guideline 3-1996 is also standard. In addition, any Tracer Summit reports can be set up for automatic printing or archiving.
Indoor air quality
Trane variable volume rooftop or air handling units can provide fresh, outdoor air without compromising energy savings. These products can be configured with dampers for precise measurement and control of outdoor air supplied to the building space. The high efficiency filter option available on both rooftop and air handler units can lower the dust and pollen levels, further improving the air quality.

In the comfort zone
The combination of small rooftops, temperature sensors and system controllers provides easy to use, affordable building control for small to medium buildings. The system works by creating zones of comfort control based on the needs of building occupants, rather than equipment parameters. Zoning can reduce utility costs by efficiently matching equipment operating times to comfort needs.

For added flexibility the system allows building occupants to temporarily turn on the comfort system after normal operating hours. The Tracker building control panel provides the building operator with management information and control either onsite or from a remote location.
Committed to quality

More than 175,000 circuit boards are produced annually at the Trane facility in St. Paul, Minnesota, USA.

State of the art machines place components onto the circuit board. The populated circuit boards are then cured at high heat or soldered and washed with de-ionized water.

The assembled boards are then tested for continuity, shorts, and reversed polarity. Heat sensitive components such as LCDs and plastic parts are hand inserted on the boards. Each person on the assembly line uses a method sheet to check the work of the person before them and perform their own work.

Boards must pass initial power-up, functional and software tests, a final communications test and then receive a quality inspection stamp. The final assembly team takes the tested boards and mounts them in the enclosures. These steps help ensure that Trane controls function reliably on the job.

The Trane Building Automation System facility has been certified to ISO 9001 standards, more proof of our commitment to providing consistent quality to our customers.