# Building Design and Analysis Tools



## Comprehensive HVAC analysis, training and support

**Comprehensive**

For more than 40 years, Trane has been providing analysis software to promote energy-effi cient, environmentally responsible practices to sustain high-performance buildings for life. This philosophy has never changed: rather, it is strengthened with today's focus on the environment. Trane has pioneered building and HVAC system analysis software tools that are among the most powerful in the business. So, whether you are conducting a comprehensive load analysis, profi ling system performance or determining the optimal HVAC components or confi gurations for a given installation, we have a software package that will provide you with a solution for today's performance and design demands.

**Modeling Functionality**

Product innovation is core to Trane engineers. Our development team carries a responsibility to lead the industry in serving customer needs by innovating HVAC design and analysis software solutions that enable designers to practice environmental responsibility. Whether you're designing for energy optimization,

LEED® or ASHRAE Standard compliance, our software is one of the fi rst to deliver the latest methodologies ensuring that you are using the most comprehensive software available.

**World-Class Support and Training**

Trane understands that keeping up with the latest technologies is challenging work. That's why our Customer Direct Service (C.D.S.) support team makes customer service and training its number one priority. Our training sessions are designed for engineers, architects and HVAC design professionals to help you get the most out of your Trane software application. Whether you need software training, application education or information on the latest industry trends and compliance requirements, our unrivaled, dedicated C.D.S. support team is here to answer your questions. For more information, visit www.tranecds.com.

> "C.D.S. support always answers any question promptly with 100 percent accuracy, and with a friendly attitude. Thanks and keep up the great work!"
> –a current C.D.S. customer

# Analysis Software

### TRACE™ 700

Trane Air Conditioning Economics, or TRACE, helps HVAC professionals optimize the design of a building's HVAC system based on energy utilization and life cycle cost. New systems, such as underfloor air distribution and chilled beam, continue to be added to help practitioners verify actual performance. The latest version of TRACE can model baseline buildings according to ASHRAE Standard 90.12010 requirements and automatically populate LEED Online templates with TRACE 700 output.

### System Analyzer™

System Analyzer is a comparative analysis tool for preliminary evaluations of HVAC systems based on energy and economic performance. Using the same calculation engine as TRACE 700, you can quickly evaluate virtually any combination of air distribution system(s) and cooling/heating equipment for a specific weather location and building type. System Analyzer can compare up to four system design alternatives per project—making it easier for you to choose the best HVAC system for a particular application.

### Trane Acoustics Program (TAP™)

TAP acoustical analysis software makes it easy to accurately predict system sound levels. Quickly compare the sound characteristics of several system alternatives and choose the one that best satisfies the design criteria. The program can be used to meet LEED® for Schools IEQ Prerequisite 3 and IEQ Credit 9.

### TRACE 700 Chiller Plant Analyzer™

TRACE 700 Chiller Plant Analyzer software saves time by allowing easy plant configuration comparisons using a detailed wizard. Using the accuracy of the TRACE 700 calculation engine, the program calculates the energy and economic effects of virtually any chiller plant configuration by generating load profiles based on location and predefined building types.

# Design Software

### TRACE 700 Load Design

TRACE 700 Load Design provides the load design capabilities of TRACE 700 using the same calculation engines, file extensions and libraries, making the conversion of a load design file to a full energy and economic analysis a seamless process.

### TRACE 700 Load Express

TRACE 700 Load Express is a simplified version of the TRACE 700 Load software and allows new designers and experienced users alike to perform accurate load calculations in minutes.

### VariTrane™ Duct Designer

Use VariTrane Duct Designer to streamline duct design and improve calculation precision. The software consists of three applications: **Duct Configurator** to model and size duct supply systems, **Ductulator®** to size system components and determine nominal duct size for equal friction applications, and **Fitting Loss Calculator** to identify optimal fittings and sizes for each duct section by comparing efficiency and cost.

### Engineering Toolbox

Engineering Toolbox provides nine calculation utility programs in one to simplify HVAC design and service tasks. The programs include power factor correction, refrigerant properties, refrigerant line sizing, properties of air and mixed air, Ductulator®, fluid properties, fan law calculator and a unit converter.

### Trane Pipe Designer

Use Pipe Designer to determine required pipe sizes, find the critical path for proper pump sizing, and calculate pressure drops through valves/fittings or from elevation changes. It can also generate a complete bill of materials and provide detailed reports for analysis.

### TOPSS™

Trane Official Product Selection System (TOPSS) is a powerful software package to help you generate a list of Trane product selections that meet or exceed your specifications.