



**TRANE®**

*Cooling and Heating  
Systems and Services*

# Low Temperature Systems

*For Food and Beverage applications*



*The cold chain that stretches from producers to consumers through processing, manufacturing, packaging, storage and distribution is the key to ensuring the quality, safety and profitability of our Food and Beverage.*

## Understanding your needs

Trane, the world's largest independent HVAC company, understands the issues associated with critical conditions of the Food and Beverage industry.

From simple warehousing to complex food processing plants, Trane develops appropriate integrated low temperature systems meeting the **air distribution, temperature, humidity and filtration requirements** and complying with good engineering practices and local codes.

Unique cooling loads based on extreme conditions require **high efficiency chillers at full and part load**. Using glycol or brine solutions allows us close control of indoor conditions and to use the full capacity of the optimized cooling coils.

**Downtime is not an option.** The reliability of the system is the result of optimizing design, equipment, installation and maintenance issues.



## Critical Requirements for Food and Beverage Industry

- Low life cycle cost
- Close temperature and humidity control
- 100% reliability
- Energy efficiency
- Easy operation and maintenance
- Compliance with refrigerant and safety codes
- Compliance with food regulations
- Adaptability

## Typical Applications

- Food processing: meat, poultry, eggs, fish
- Dairy: milk, cream, cheese
- Beverage: soft drinks, beers, wine processing and storage
- Vegetables, flowers: dry and wet cooling

## Chiller Capabilities

- Outside air from -18°C to +52°C
- Minimum leaving water temperature, with glycol: -12°C



## Integrated Systems

*In the Food and Beverage industry, it is the system which is paramount. This includes integration of several components like chillers, pumps, air distribution, temperature and humidity controls.*



### Chillers

Trane chillers have been known for decades in a wide range of industrial and comfort applications. The compressor is the heart of the system: in the 90's Trane implemented rotary technology for all compressors and demonstrated the reliability brought about by this change. The HVAC industry has now recognized the soundness of this choice and has adopted Trane technology as a standard.

### Chilled water or brine systems

Using glycol helps to reduce the volume of refrigerant in the packaged chiller and therefore the potential risks usually associated with using ammonia or other HCFC fluids. Direct expansion and recirculation of refrigerant are complex and need refrigeration specialists for the daily operation and maintenance.



### Controls

The strategy of Trane controls is to benefit from all the information used by the unit mounted control fitted on all equipment in order to interact with the system. Pre-engineered functions are implemented on the system so that commissioning time can be as short as possible.

In order to optimize the overall system, Trane uses WEB applications, BACnet and LON to ease the interoperability with industrial process controls.



### Optimization

From design through the full life of the system, Trane focuses on savings. Equipment technology, piping arrangement, air terminal configurations are optimized so that you can get the best results from your installation, according to your system load profile.

### Air temperature, humidity and quality

Air distribution in cold rooms uses different systems from unit cooler to air handling units with standard or textile ducts. Air velocity, temperature, humidity and quality are driving the best choice. Excessive dehumidification damages the quality of your products and can be the origin of revenue losses.

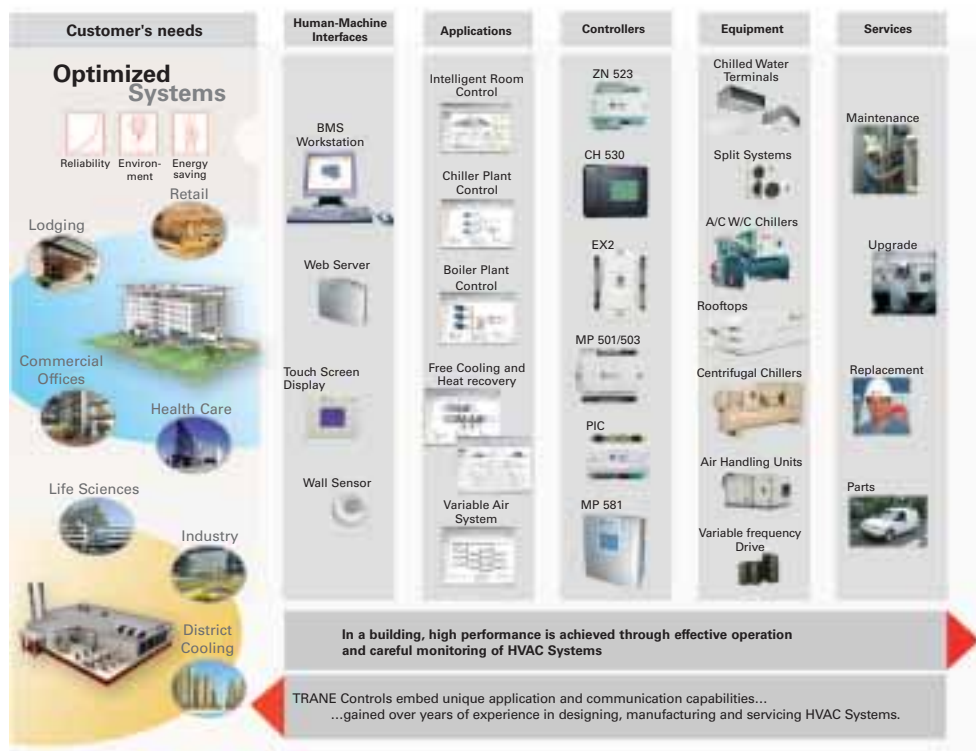
## Solutions

Trane customers benefit from our first-hand experience in thousands of projects developed by our worldwide organization. Our sales engineers are supported by our application engineers. They will work together with end users, consultants and contractors to design the optimal system.

## A true global company with local presence

Many businesses rely on Trane as the single supplier for their HVAC solutions. Trane has offices and service operations around the world. About 130 locations in Trane EMAIR (Europe, Middle East, Africa and India Region) are staffed by a team of the industry's most experienced sales engineering professionals and are organized to provide uniform local support capabilities such as engineering expertise, application assistance, service, parts and financial solutions.

In addition, Trane offices provide the benefits that come with a working knowledge of local business practices, building codes, languages, etc.



## Trane quality

Driven by our commitment to provide high quality products and services, Trane pays close attention to quality at every step of the way...from development to sales, service and replacement. Trane was the first HVAC company to obtain ISO 9001 certification in 1987.

## Environmental leadership

Trane's substantial experience in designing, building, installing and servicing environmentally conscious systems can help you meet environmental business and building performance goals, while keeping your project on schedule and within budget. Our factories in France are certified ISO14001.



[www.trane.com](http://www.trane.com)

For more information, contact your local sales office or e-mail us at [comfort@trane.com](mailto:comfort@trane.com)



Literature Order Number RLC-SLB017-E4

Date 0707

New

Literature Stocking Location Europe

Trane has a policy of continuous product and product data improvement and reserves the right to change design and specifications without notice.

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