

# *Automatic Tube Cleaning*



Trane Care customized service solutions for building owners address operating performance, energy efficiency and environment concerns. Automatic tube cleaning is the key to keeping heat exchangers operating at peak efficiency.



**Keep your HVAC system's heat exchanger working permanently at maximum efficiency**

Water-based cooling systems inevitably suffer from fouling of the heat exchanger surfaces, leading to a reduction in efficiency that leads to increased energy use and higher operating costs. Research shows that just a 0.6mm scale layer on condenser tubes reduces chiller heat transfer efficiency by 34% and increases energy consumption by 21%.

The Trane automatic tube cleaning system is a unique hydro-mechanical cleaning system that operates continuously to keep heat exchanger surfaces completely free from fouling.

The result: operating capacity and efficiency are constantly maintained at peak levels, reducing overall energy consumption.

And there's absolutely no need for periodic shut-down of the HVAC system for costly and time-wasting chemical cleaning.

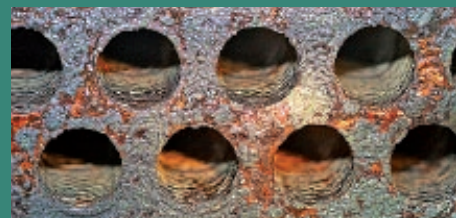
**Fast, simple installation**

Because controls are factory mounted prior to delivery, you'll benefit from rapid, problem-free installation when you opt for Trane automatic tube cleaning system.

Instead of having to spend time on site installing and testing the system controls, everything is already connected to the system and ready to go.



Tube Cleaning system installed on Trane CVGD chiller



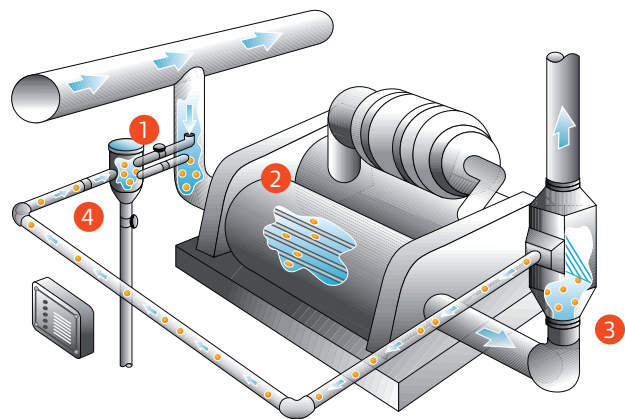
Tube before cleaning



Tube after cleaning

## Trane automatic tube cleaning – the benefits:

- **Improved operating efficiency:** the chiller continuously operates at optimum efficiency, leading to lower energy use and consequent cost reduction.
- **Extended chiller life cycle:** increasing return on investment, because the compressor never operates beyond its design limits and because condenser tube corrosion is eliminated.
- **No chiller downtime:** the automatic tube cleaning system keeps the condenser tubes permanently clean while the chiller is operating.
- **Low cleaning system operating costs:** the sponge balls used in the automatic tube cleaning system are the only consumables needing to be replaced.
- **Lower water treatment costs:** water treatment is only required to prevent scaling of ancillary equipment, leading to cost savings of as much as 50% of the cost of chemicals used for water treatment.
- **Environment friendly:** the automatic tube cleaning system uses no chemicals.



- 1 When the injection valve opens, water rushes into the ball injector and flushes sponge cleaning balls into the flow of condensing water.
- 2 The sponge balls are carried by the water into the condenser. As they pass through the condenser, the balls scour off scale and fouling from the condenser tubes.
- 3 The balls are caught by the ball trap when they exit the condenser.
- 4 The drain valve opens for a few seconds and the balls are sucked back into the injector. Water turbulence rinses the balls clean as they enter the injector and the clean balls are held to await the start of the next cleaning cycle.



### How the system works

The Trane automatic tube cleaning system features specially developed sponge balls, which are injected into the chiller condensing water flow to provide continuous tube cleaning while the chiller is in operation. The system is quick and easy to install – around 2 hours on a new installation and around 1 day on a pre-existing installation. It is delivered fully pre-programmed, with settings that can, where necessary, be simply and quickly changed to cater for varying water qualities.



### Trane Care Services

Trane Care offers an extensive array of upgrade products to answer our customers' top business priorities. Because Trane service experts will analyze your objectives, you can trust they will make the best recommendations to meet your building needs.

With Trane Care, let us show you how to enhance your cooling and heating system to like-new performance. Trane Care reliability services reduce the risk of breakdowns, improve operation and extend equipment life.



**Reliability**



**Energy**

Trane Care proposes cost effective ways to optimize the energy efficiency of your existing system and generate immediate savings.



**Environment**

Trane Care service experts can advise building owners and managers on how to manage complex issues such as building carbon foot print, occupational health, comfort, safety and compliance with national and local legislation.

### Call on Trane

Call on Trane today and get the expertise of a global leader and its experienced service professionals and resources. With more than 120 locations in Europe, Middle East, Africa and India, Trane has one of the most extensive service networks in the industry.

Our local technicians have:

- Knowledge on the history of your equipment and controls
- In-depth expertise in servicing your equipment and controls
- Access to the latest technology and support

Call us, let's talk.



Trane optimizes the performance of homes and buildings around the world. A business of Ingersoll Rand, the leader in creating and sustaining safe, comfortable and energy efficient environments, Trane offers a broad portfolio of advanced controls and HVAC systems, comprehensive building services, and parts. For more information, visit [www.Trane.com](http://www.Trane.com).

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

